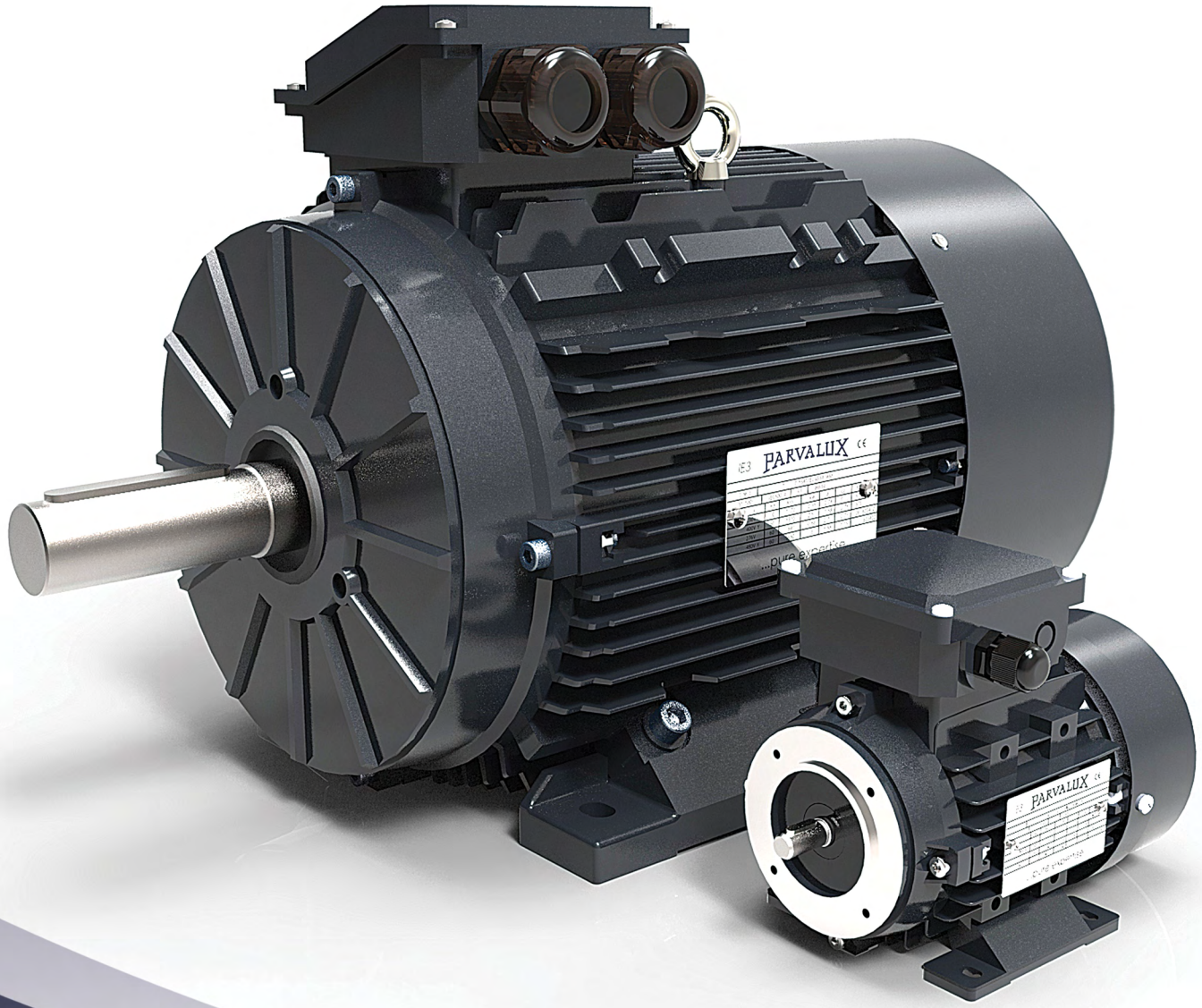
PARVALUX



Parvalux

AC Electric Motors Catalogue

Single & Three Phase

PARVALUX

ABOUT US:

- Parvalux design & manufacture an extensive range of motor & geared motor solutions
- UK manufactured and approved product
- Established 1947 with unrivalled reputation for quality geared motor solutions
- Over 20 million geared motors installed globally across OEM and SME markets
- Motor Solutions to suit your application across multiple motor technologies:
- DC Brushed
- DC Brushless
- AC induction
- AC/DC Series and DC Shunt
- All motors configurable as geared solutions.
- Serving a wide variety industry base
- Dedicated team of experienced design engineers offering modified and totally bespoke product solutions
- Supporting low, medium and high batch flexibility
- ISO 9001 Quality Management System

IN THIS ISSUE:

- The UK's most extensive range of Single and 3 phase AC electric motors
- Available in IEC standard frames 56-355 frame
- Multi Mount designs
- In Aluminium and Cast iron housings
- Range supports IE2 & IE3 efficiency rating requirements
- 3 phase motors from 10 watts to 315kw
- Single phase permanent capacitor from 8 watts to 3kw
- Single phase dual capacitor up to 4kw
- Brake motors up to 18.5kw
- Easily interchangeable with other branded motors
- Speed controllable
- Increase output motors available
- Non-standard products available upon request
- Range configurable as a geared solution

CONTENTS

MANUFACTURING

Since 1947 we have been manufacturing geared motor solutions, during this time we have built a tremendous reputation for offering one of the world's most extensive and reliable ranges of customisable AC and DC geared motor units. With over 20 million geared motors installed globally, we are proud of our heritage and reputation for high quality.

PLANNING:

- Enterprise-level ERP system
- MRP control and classic pull systems
- Effective work order scheduling & order prioritisation

SUPPLY CHAIN:

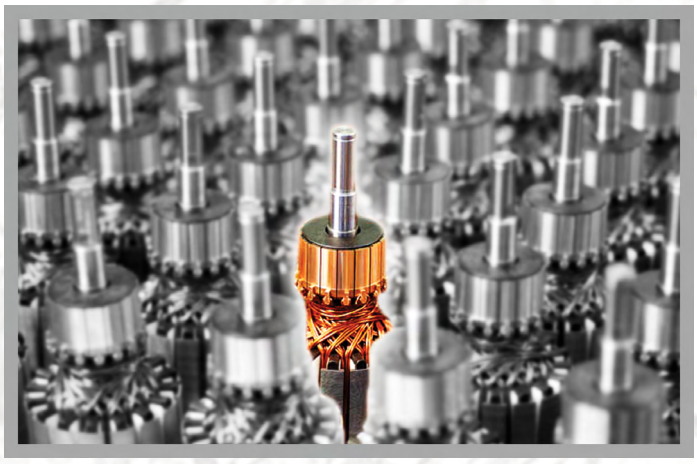
- Global multi-source supply chain
- UK & International source for critical components maximising cost and flexibility
- S4 standard QA inspection at source
- Demand management focus ensuring optimum stock levels

PRODUCTION:

- UK manufacturing base
- 120,000 sq.ft split over 2 modern manufacturing sites
- Production capacity 500,000 units annually
- Modern CNC machine shop for precision parts
- Gear manufacturing
- High specification armature and stator winding with multi machine redundancy
- Mulitpoint automated 'go/no-go' test stations

ASSEMBLY:

- Lean manufacturing & kanban systems
- Cellular manufacturing to optimise efficiency through synergy
- Flow lines for low, medium & high volume assembly
- Best in class manufacturing methodology
- Value-add assembly of customer supplied parts and sub-assemblies
- Painting and finishing



COMPLIANCE:

- ISO 9001:2000 Quality Management System
- 100% product fully tested before leaving the factory
- Electromagnetic Compatibility (EMC) directive 2004/108/EC
- Low voltage directive 2006/95/EC; motors meet EN60204
- CE marked

BEFORE YOU ORDER

- Unbiased product advice from our customer support team
- Customise and configure product to your exact requirements
- Fully bespoke product design services available
- Online product selectors and data sheets
- Online Engineer web chat at www.parvalux.com
- Full Engineering support:
  - 3D Models & CAD drawings
  - Application support from our expert application engineers
  - Field based engineering team able to visit your site
  - In-house 24 x 7 dedicated test centre
- View your previous orders at our customer portal (Coming soon)
- Can't find what you want? Try Parvalux Plus! See page 5 for details
- Check price and delivery
- Unbeatable delivery performance at Parvalux Birmingham

WHEN YOU ORDER

- Friendly customer support team
- Flexible ways to place your order:

Parvalux Birmingham:	Call: +44 (0) 121 333 5964	Email service@parvalux.com
Parvalux Bournemouth:	Call: +44 (0) 1202 512 575	Email: sales@parvalux.com

- Speedy order confirmation
- Competitive, market priced products for all your volume needs
- Dedicated customer specific pricing & contracts for larger volume needs

RECEIVING YOUR ORDER

- Various payment methods
  - Pro-forma
  - Credit terms available on request
- Call for progress updates & POD paper work
- Delivery method to suit your immediate need
  - Export service available
  - Customer courier collection
- Flexible stock management programs
  - Ex-stock availability on many products
  - Forward/schedule order capabilities
  - Buffer stock service
  - Consignment stocking
  - Kan-Ban
  - Managed forecast service available

AFTER SALES CARE

- Order progressing & expediting
  Parvalux Birmingham Call: +44 (0) 121 333 5964
  Parvalux Bournemouth Call: +44 (0) 1202 512575
- On-line order book management via your customer portal (coming soon)
- Up to 2 year product warrantee
- Dedicated customer support team to help you every step of the way
- Full suite of online and offline technical support capabilities
- Returnable pallet scheme
- Spares and repairs service

PARVALUX BIRMINGHAM

Based from a central UK location, and conveniently placed next to the UK's major road network, our Birmingham facility is ideally placed to service low volume customer needs with a highly responsive service tailored to meet individual customer requirements.

EXTENSIVE STOCKS

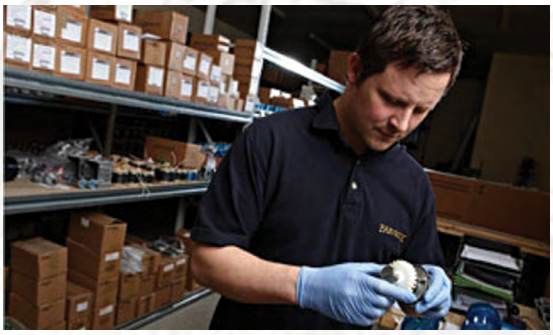
- Stocked ranges from the Parvalux core offer for both DC and AC geared motor requirements
- FastTrack configuration service available to modify the unit to your application
- World beating service for small to medium size businesses for both manufacturing or spare/repair needs

FAST DELIVERY TIMES

- Same day, walk-in service at the Birmingham site
- Same day dispatch, next day delivery options
- Covering both standard or modified products

RAPID SERVICE & TECHNICAL SUPPORT

- Dedicated & experienced engineers available to support immediate technical needs
- 24hr quotation turnaround
- Out of hours service for 24hr availability



DIAGNOSTICS & REPAIR

- Experienced & trained engineers on site to repair & refurbish installed units
- Full product warrantee on new or repaired units
- Please contact our customer support team for full details. Terms & conditions apply.

CONTACT:

Call Parvalux Birmingham +44 (0)121 333 5964
Email Parvalux Birmingham service@parvalux.com
Drop by our facility Unit4, 26 Avenue Road, Birmingham, B6 4DY

IF WE DON'T MAKE IT, WE'LL FIND IT FOR YOU OUR NEW PRODUCT PROCUREMENT SERVICE – SAVES YOU TIME & MONEY

PARVALUX PLUS

With over 70 years' experience in the motor and gear box industry we know all there is to know about geared motor solutions and we want our customers to benefit from our knowledge.

During that time we have established robust supply chains for all types of motors and gearboxes, even those we do not manufacture in the UK, and can offer these benefits to you…whatever your product or application needs.

BENEFITS:

- Enquiry response within 48hrs
- Technical support & guidance in finding to right product solution
- All products backed by our Parvalux Promise and fully approved
- Tested to meet our stringent quality standards
- Covers all motor, gearbox, and geared motor solutions no matter how obscure
- Stocking service available for regular volume requirements
- One supply chain to manage

You won't find any of our Parvalux Plus items listed on our website as every enquiry we receive is different from the last.

If the product isn't quite right for your project please get in touch and we can help you find the right solution.

CONTACT:

For all your motor requirements call our experienced Parvalux Plus applications team today:
Call Parvalux Bournemouth +44 (0) 1202 512 575
Email: sales@parvalux.com

OUR FULL PRODUCT RANGE

DC BRUSHED MOTORS

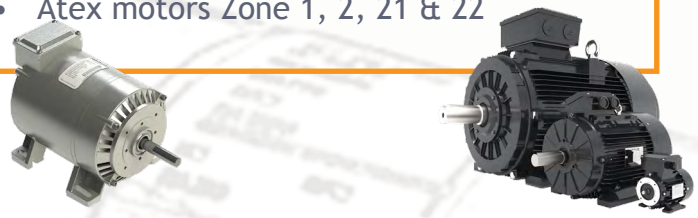
- Extensive range of DC Brushed motors up to 750 watts continuously rated
- Sealed to IP56
- Motors can be fully customized to meet your exact requirements and controlled through our range of DC drives.

DC BRUSHLESS MOTORS

- Motor power up to 500 watt continuously rated
- Wider range of sizes all configurable as a geared solution
- Integral controllers and hub motors also available

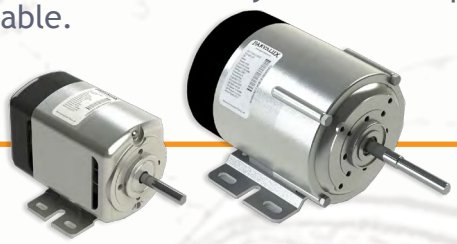
AC ELECTRIC MOTORS

- Huge range of AC electric motors
- Single phase from 8 watts to 4kw
- Three phase from 15 watts to 315kw
- IEC Standard frames
- IE2 and IE3 efficiencies supported
- Range supports a wide spectrum of applications
- Brake motors
- Increased output power motors
- Atex motors Zone 1, 2, 21 & 22



AC/DC SERIES & DC SHUNT

- Motor power from 10 to 150 watts.
- Supporting applications where there is a requirement for a high starting current.
- Ventilated and Totally enclosed options available.



GEARED SOLUTIONS

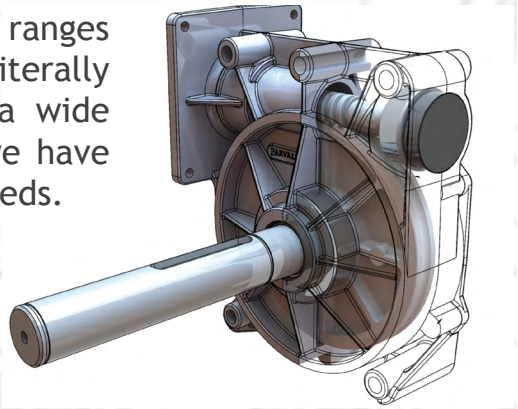
- Extensive range of geared solutions whether inline or right angle, 3 point fixing, single speed or two speed
- Worm, double worm, spur, planetary and reduction boxes all available

AND MUCH, MUCH MORE

- DC Drives
- Inverters
- Sensors
- Brakes
- Tachos
- Enquire today

STANDARD

We offer one of Europe's most extensive ranges of electric motors and gearboxes, with literally millions of combinations. With such a wide choice from our standard catalogue we have the solution to support your product needs.

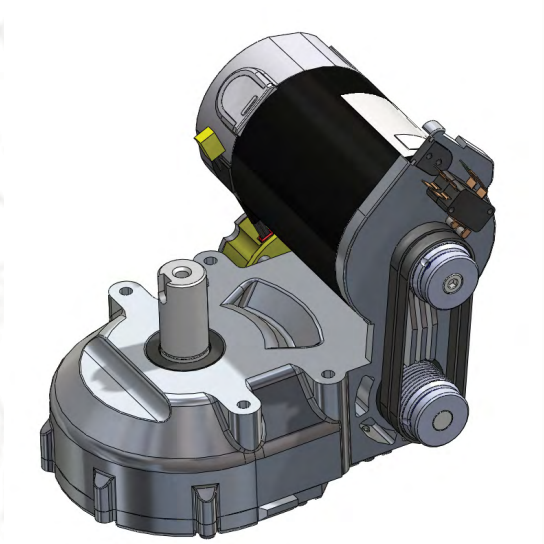


CUSTOMISED

Take any one of our standard products and specify any number of modifications to realise your preferred solution. From design through to production we have truly unique delivery capacity, one unit through to thousands. Our responsiveness and flexibility in providing customised products in small or large quantities at competitive prices is, we believe, unrivalled.

TOTALLY BESPOKE

Realise your application solution with a totally bespoke product that meets your precise mechanical, electrical and environmental requirements.



Why design your application around a product when we can design our products around your application! We believe we offer a proven 'added-value' to our customers' products that offers them a competitive advantage in their respective markets.

Working as an extension to our customer's design capability from the outset we develop geared motor concepts for volume applications that meet the customer's exact specification. Utilizing FMEA and DFMEA coupled with our dedicated testing facility which replicates and accelerates product life testing, we are able to reduce 'time to market' and ensure the product meets all performance requirements.

HOW WE CAN SUPPORT YOU

...Vision

Leading European Manufacturer

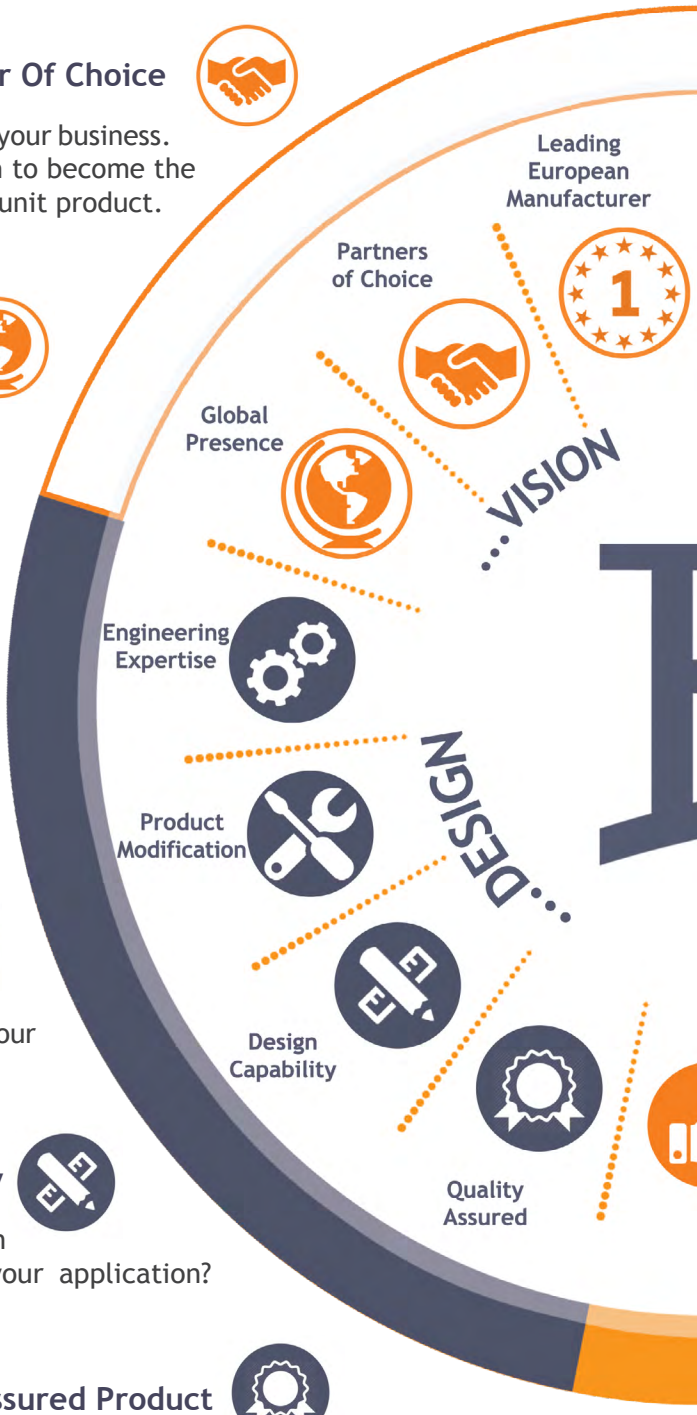
With strong performance credibility in multiple markets with nearly 70 years' of experience, our vision is to advance our reputation as Europe's leading added-value geared motor manufacturer.

Partner Of Choice

We've invested to double our capacity meaning we can grow with your business. Our vision is to leverage our 'value add' solution based approach to become the partner of choice for businesses requiring direct drive or geared unit product.

Global Presence

Our vision is to provide worldwide coverage of Parvalux product. Global presence for a Global Market.



...Design

Engineering Expertise

Our engineering and design teams wealth of industry experience, access to the latest design software coupled with their solutions based approach means we can meet and support all your engineering needs.

Product Modification

Highly Customisable Product: Customise and configure a product to your exact requirements, we will deliver you your preferred solution for your application.

Design Capability

Totally Bespoke Product Design. Why design your application around our products, when we can design our products around your application?

Quality Assured Product

Our reputation for providing the highest quality products stems from our products design and our quality assured production process. All products designed, manufactured and supplied by Parvalux undergo a variety of tests through the design lifecycle to ensure that our products are fit-for-purpose and will meet our customers exact needs.

...Service

Extensive Product Portfolio

Over 150,000 standard catalogue products available spanning across multiple technologies means we have the product to meet your exact requirements.

Technical Expertise

Our team comprises of factory-trained experts with over 100 years of combined experience. Their extensive knowledge of the industry and wide range of application experience allows them to identify the right solution for your application.

Supply Chain Solutions

Using our industry expertise, we now supply geared motors and related products from beyond our standard range to deliver your total product solution.

To find more about the benefits of using the 'Parvalux Plus' service please refer to page 5..

Highly Responsive Service

With an extensive stock holding, our dedicated service team offers a highly responsive service and is able to select, configure, dispatch and deliver products in under 24-hours. To find out more please see page 4.

Production Flexibility

Low and high volume production flexibility with no minimum order quantities. Whether 1 unit or thousands we can support your order volume.

Dedicated Testing Facility

Our well-equipped 24 x 7 test facility is stocked with extensive equipment to simulate application specific endurance testing, meaning we can accelerate product life tests.

Customer Care

Dedicated key account management, Customer care support team, engineer online, Parvalux Birmingham and our 24/7 customer portal are all available to support your needs.

Easy to Deal With

Parvalux offers you various ordering methods, knowledgeable staff, short lead times, no minimum order quantities, industry experts, supply chain solutions - buffer stock, consignment ability and much more.

AC RANGE OVERVIEW - SINGLE PHASE

	SD SERIES	A1PC SERIES	A1CSR SERIES
			
OVERVIEW	OUR TRADITIONAL LOW POWERED SINGLE PHASED AC MOTORS. PERMANENT CAPACITOR & CAP START/RUN	SINGLE PHASED - PERMANENT CAPACITOR MOTORS IN IEC STANDARD FRAMES	SINGLE PHASED - CAPACITOR START/RUN IN IEC STANDARD FRAMES
PHASE	SINGLE	SINGLE	SINGLE
POWER RANGE	8 - 190 WATTS	0.09 - 3 KW	0.18 - 4 KW
FRAME TYPE	TRADITIONAL PARVALUX FRAME & IEC	IEC	IEC
FRAME SIZE	PARVALUX FRAME & IEC 56/63	56-100	63-112
SPEED	ASYNCHRONOUS & SYNCHRONOUS SINGLE & TWO SPEEDS AVAILABLE	ASYNCHRONOUS SINGLE SPEED	ASYNCHRONOUS SINGLE SPEED
EFFICIENCY	N/A - NO LEGISLATION	N/A - NO LEGISLATION	N/A - NO LEGISLATION
HOUSING MATERIAL	DIE CAST ZINC ALLOY	ALUMINIUM	ALUMINIUM
AVAILABLE MOUNTING POSITIONS	FEET, FLANGE OR BOTH	B3, B5, B14, B34 & B35	B3, B5, B14, B34 & B35
PAGE	PAGE 14	PAGE 43	PAGE 36
FEATURES AND BENEFITS	• LOW POWERED, COMPACT AND COST EFFECTIVE MOTOR RANGE • REVERSIBLE • SINGLE AND TWO SPEED MOTOR OPTION • HIGHLY CUSTOMISABLE TO FIT YOUR EXACT REQUIREMENTS • CONFIGURABLE TO WIDE RANGE OF PARVALUX GEARBOXES	• IEC FRAME • EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS • SUITABLE FOR MOST FAN AND LOW STARTING TORQUE APPLICATIONS WHERE STARTING TORQUE REQUIREMENTS ARE 0.5-0.9 TIMES FULL LOAD TORQUE.	• IMPROVED STARTING TORQUE • IEC FRAME • EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS • SUITABLE FOR APPLICATIONS WHERE STARTING TORQUE REQUIREMENTS ARE 1.8-2.5 TIMES FULL LOAD TORQUE.

SD SERIES	A3 SERIES	A3B SERIES	A3H SERIES	C3 SERIES
				
OUR TRADITIONAL LOW POWERED AC INDUCTION THREE PHASED MOTORS.	ALUMINIUM IEC METRIC FRAME, 3 PHASED MOTORS	3 PHASED BRAKE MOTOR IN IEC STANDARD FRAMES	ENERGY SAVING, HIGH EFFICIENCY, ALUMINIUM IEC STANDARD FRAME MOTORS.	ENERGY SAVING, HIGH EFFICIENCY, CAST IRON MOTORS. AVAILABLE IN BOTH IEC AND NEMA FRAMES.
THREE	THREE	THREE	THREE	THREE
10 - 250 WATTS	0.09 - 37 KW	0.09 - 18.5 KW	0.75 - 37 KW	2.2 - 315 KW
TRADITIONAL PARVALUX FRAME & IEC	IEC	IEC	IEC	IEC
PARVALUX FRAME & IEC 56/63	56-200	63-160	80-200	132-355
SINGLE & TWO SPEEDS AVAILABLE	ASYNCHRONOUS SINGLE SPEED	ASYNCHRONOUS SINGLE SPEED	ASYNCHRONOUS SINGLE SPEED	ASYNCHRONOUS SINGLE SPEED
N/A - NO LEGISLATION	IE1, IE2	N/A - NO LEGISLATION	IE2, IE3	IE2, IE3
DIE CAST ZINC ALLOY	ALUMINIUM	ALUMINIUM	ALUMINIUM	CAST IRON
FEET, FLANGE OR BOTH	B3, B5, B14, B34 & B35	B3, B5, B14, B34 & B35	B3, B5, B14, B34 & B35	B3, B5, & B35
PAGE 20	PAGE 51	PAGE 61	PAGE 71	PAGE 81
• LOW POWERED, COMPACT & COST EFFECTIVE MOTOR RANGE • SINGLE AND TWO SPEED MOTOR OPTION • HIGHLY CUSTOMISABLE • CONFIGURABLE TO WIDE RANGE OF PARVALUX GEARBOXES	• IEC FRAME • EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS • LIGHTWEIGHT, HIGH PERFORMANCE AND LOW NOISE LEVELS. • MULTI-MOUNT DESIGN GIVES END USERS GREATER FLEXIBILITY	• QUICK BRAKING TIMES • SUITABLE FOR A VARIETY OF APPLICATIONS INCLUDING; BRAKING OF LOADS OR TORQUES ON THE DRIVE SHAFT	• LIGHTWEIGHT YET RUGGED AND SUITABLE FOR MANY APPLICATIONS INCLUDING: • PUMPS, FANS, COMPRESSORS, MINING, AGRICULTURAL, MARITIME, HYDRAULIC ETC	• HIGHLY ENERGY EFFICIENT UP TO IE3 • ROBUST AND RELIABLE • HIGHLY VERSATILE DESIGN AND ADAPTABLE TO SUIT MANY APPLICATIONS.

POWER & PRODUCT PAGE GUIDE

SINGLE PHASE

FRAME TYPE	PARVALUX & IEC				IEC		IEC			PARVALUX & IEC				
TYPE	PERMANENT CAPACITOR				CAP START/RUN		PERMANENT CAPACITOR							
EFFICIENCY RATING	NO EFFICIENCY LEGISLATION				NO LEGISLATION		NO LEGISLATION			NO EFFICIENCY LEGISLATION FOR POWER RATING				
POLE	2	4	6	2 SPEED	2	4	2	4	6	2	4	6	2 SPEED	2
SPEED (R/MIN)	2800	1400	900	2800/1400	2800	1400	2800	1400	900	2800	1400	900	2800/1400	2800
POWER (KW)	SD SERIES				A1CSR SERIES		A1PC SERIES			SD SERIES				
0.008	.	PG 18	.	.	.	.	.	.	.	.	.	.	.	.
0.010	.	PG 18	PG 19	.	.	.	.	.	.	.	PG 20	PG 21	.	.
0.020	PG 18	.	.	.	.	.	.	.	.	.	.	PG 21	.	.
0.025	PG 18	PG 18	.	.	.	.	.	.	.	PG 20	.	.	.	.
0.035	.	.	PG 19	.	.	.	.	.	.	.	PG 20	.	.	.
0.030/0.050	.	.	.	PG 19	.	.	.	.	.	.	.	.	PG 21	.
0.050/0.100	.	.	.	PG 19	.	.	.	.	.	.	.	.	PG 21	.
0.060	PG 18	PG 18	.	.	.	.	.	PG 44	.	PG 20	PG 20	PG 21	.	.
0.090	.	.	.	.	.	.	PG 44	PG 44	PG 45	.	.	.	.	PG 52
0.100	PG 18	PG 18	.	.	.	.	.	.	.	.	.	.	.	.
0.120	.	PG 18	.	.	.	PG 37	PG 44	PG 44	PG 45	PG 20	PG 20	.	.	PG 52
0.150	PG 18	PG 18	.	.	.	.	.	.	.	.	.	.	.	.
0.180	PG 18	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	PG 20	PG 20	.	.	PG 52
0.250	.	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	PG 20	.	.	.	PG 52
0.370	.	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	.	.	.	.	PG 52
0.550	.	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	.	.	.	.	PG 52
0.750	.	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	.	.	.	.	PG 52
1.1	.	.	.	.	PG 37	PG 37	PG 44	PG 44	PG 45	.	.	.	.	.
1.5	.	.	.	.	PG 37	PG 37	PG 44	PG 44	.	.	.	.	.	.
2.2	.	.	.	.	PG 37	PG 37	PG 44	PG 44	.	.	.	.	.	.
3	.	.	.	.	PG 37	PG 37	PG 44	PG 44	.	.	.	.	.	.
3.7	.	.	.	.	PG 37	PG 37	.	.	.	.	.	.	.	.
4	.	.	.	.	PG 37	PG 37	.	.	.	.	.	.	.	.
5.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
9.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.
18.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	.	.	.	.	.	.	.	.	.	.	.	.	.	.
55	.	.	.	.	.	.	.	.	.	.	.	.	.	.
75	.	.	.	.	.	.	.	.	.	.	.	.	.	.
90	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110	.	.	.	.	.	.	.	.	.	.	.	.	.	.
132	.	.	.	.	.	.	.	.	.	.	.	.	.	.
160	.	.	.	.	.	.	.	.	.	.	.	.	.	.
200	.	.	.	.	.	.	.	.	.	.	.	.	.	.
250	.	.	.	.	.	.	.	.	.	.	.	.	.	.
315	.	.	.	.	.	.	.	.	.	.	.	.	.	.

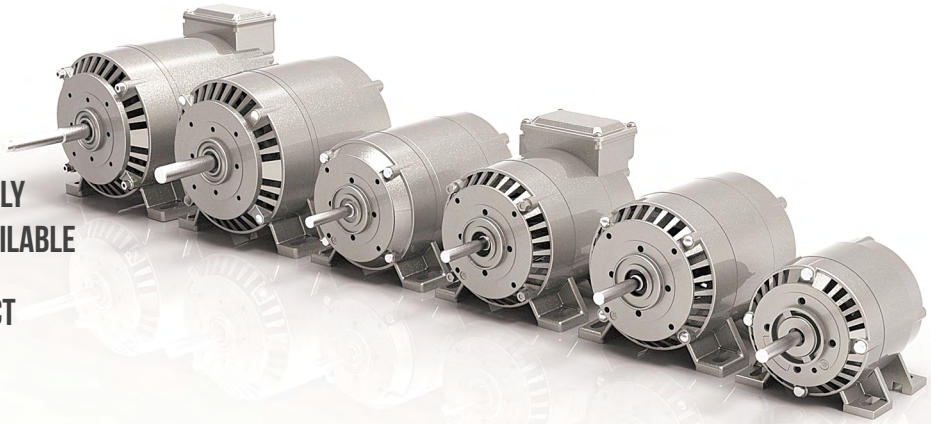
3 PHASE

IEC									IEC						IEC			
ALUMINIUM									CAST IRON						BRAKE MOTOR			
IE1			IE2			IE3			IE2			IE3			NO LEGISLATION			
4	6	8	2	4	6	2	4	6	2	4	6	2	4	6	2	4	6	8
400	900	750	2800	1400	900	2800	1400	1000	2800	1400	900	2800	1400	900	2800	1400	900	750
A3 & A3H SERIES									C3 SERIES						A3B SERIES			
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
G 52	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	.	.	PG 64	PG 65
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	.	PG 63	PG 64	PG 65
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
G 52	PG 53	PG 53	.	.	.	.	.	.	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
G 52	PG 53	PG 53	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	.	.	.	.	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	PG 83	.	.	PG 85	PG 62	PG 63	PG 64	PG 65
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	.	.	PG 83	.	.	PG 85	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	PG 62	PG 63	PG 64	PG 65
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	PG 62	PG 63	PG 64	PG 65
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	PG 62	PG 63	PG 64	
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	PG 62	PG 63	PG 64	
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	PG 62	PG 63	.	
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	PG 62	.	.	
.	.	.	PG 54	PG 54	PG 55	PG 74	PG 74	PG 75	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	PG 54	PG 54	.	PG 74	PG 74	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	PG 54	.	.	PG 74	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	PG 83	PG 84	PG 84	PG 85	.	.	.	
.	.	.	.	.	.	.	.	.	PG 82	PG 82	.	PG 84	PG 84	.	.	.	.	

SD SERIES

KEY FEATURES:

- OUR TRADITIONAL RANGE OF LOW POWERED AC ELECTRIC MOTORS
- SINGLE & THREE PHASE
- COMPACT DESIGN
- VENTILATED, TOTALLY ENCLOSED & TOTALLY ENCLOSED FAN COOLED ENCLOSURES AVAILABLE
- HIGHLY CUSTOMISABLE TO FIT YOUR EXACT REQUIREMENTS
- SINGLE AND TWO SPEEDS AVAILABLE
- ASYNCHRONOUS AND SYNCHRONOUS MOTORS AVAILABLE
- CONFIGURABLE TO A WIDE RANGE OF GEARBOXES TO SUPPORT YOUR GEARED MOTOR SOLUTION



SINGLE & THREE PHASE AC MOTORS 8 -250 WATTS

RANGE OVERVIEW - SINGLE PHASE

POWER RANGE:	8-190 WATTS
CAPACITOR TYPE:	PERMANENT CAP & CAP START/RUN
POLES:	2/4/6 AND TWO SPEEDS
VOLTAGES:	110V/220V 50HZ
ENCLOSURES:	TENC (TOTALLY ENCLOSED), VENT (VENTILATED) AND TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	FEET, FLANGE OR BOTH
DEGREE OF PROTECTION:	IP54 OTHERS AVAILABLE UPON REQUEST
TEMPERATURE CLASS:	CLASS B
CERTIFICATION:	CE APPROVED

RANGE OVERVIEW - THREE PHASE

POWER RANGE:	10-250 WATTS
POLES:	2/4/6 AND TWO SPEEDS
VOLTAGES:	220/230/380/440V 50HZ
ENCLOSURES:	TENC (TOTALLY ENCLOSED), VENT (VENTILATED) AND TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	FEET, FLANGE OR BOTH
DEGREE OF PROTECTION:	IP54 OTHERS AVAILABLE UPON REQUEST
TEMPERATURE CLASS:	CLASS B
CERTIFICATION:	CE APPROVED

CUSTOMISATIONS AND OPTIONAL EXTRAS

Our SD Series motors are highly customisable and can be configured with a wide range of optional extras to suit your exact requirements. A list of commonly requested customisations and optional extras are detailed below:

CUSTOMISATIONS

Shaft non-standard
- Length
- Diameter
- Double ended
- Stainless steel
- Keyway, flats, tapped holes etc.

Terminal Box Positions
- Left Hand Side
- Right Hand Side
- On Top

Mounting Flange Modifications

Paint

UL Certification upon request

Lead Length

Thermal overload protection

IP 65

IP Protection Ratings

OPTIONAL EXTRAS

Electro-Magnetic Brakes

Tachogenerator

Capacitors

SD RANGE - AVAILABLE ENCLOSURES & MOUNTING FRAMES

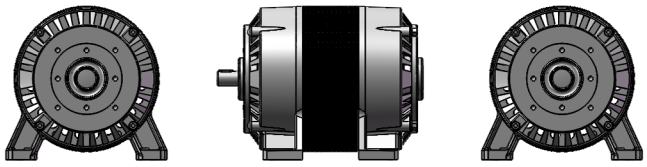
Our SD motor range are available in 3 choices of enclosure; Ventilated, Totally Enclosed or Totally Enclosed Fan Cooled. Other IP protection ratings to suit your application requirements are available upon request.

Our SD motor range as standard are also available in 3 choices of mounting frame type; Parvalux Frame, IEC 56 & IEC63 (as illustrated below).

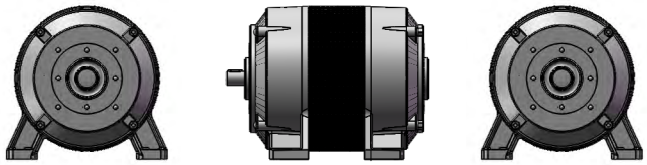
The table identifies the available enclosures and mounting frame type for each SD motor.

AVAILABLE ENCLOSURES

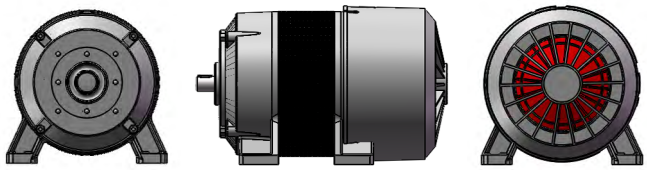
VENT - VENTILATED (IP 20)



TENC - TOTALLY ENCLOSED (IP 50 WITH TBOX IP54)

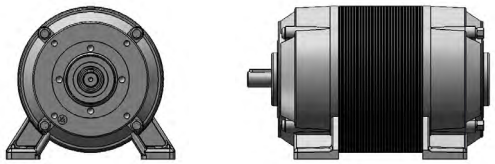


TEFC - TOTALLY ENCLOSED FAN COOLED (IP 54)

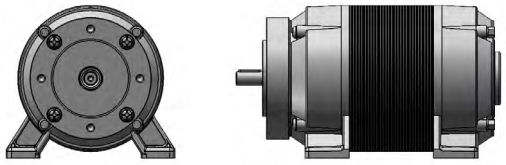


AVAILABLE MOUNTING FRAMES

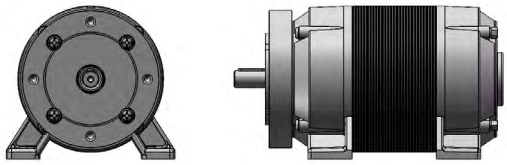
PARVALUX FRAME



IEC 56 FRAME

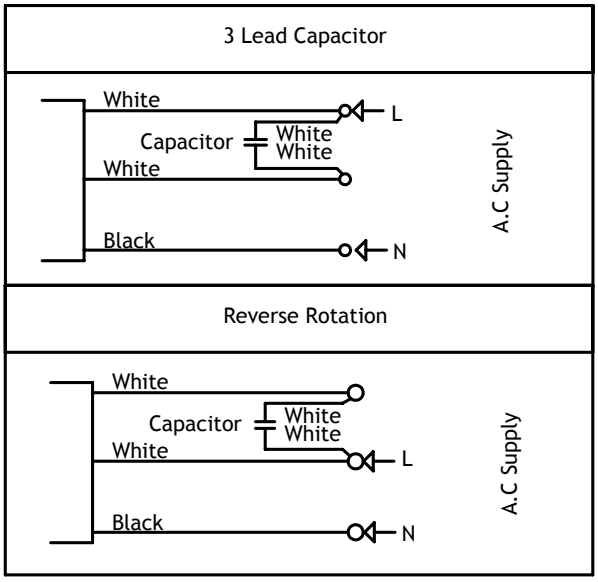


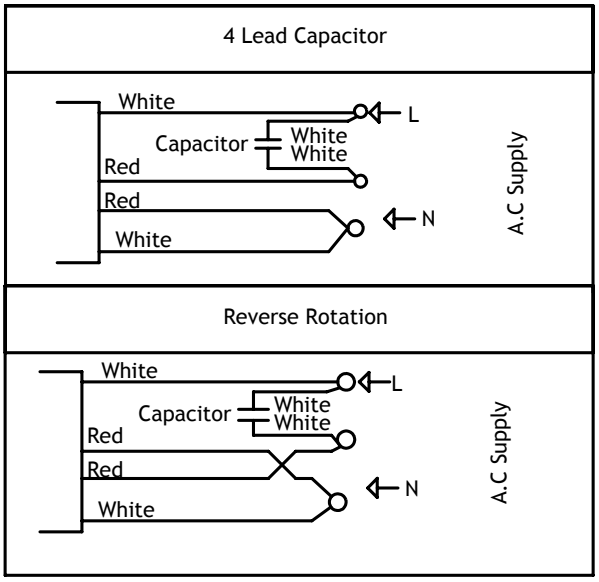
IEC 63 FRAME

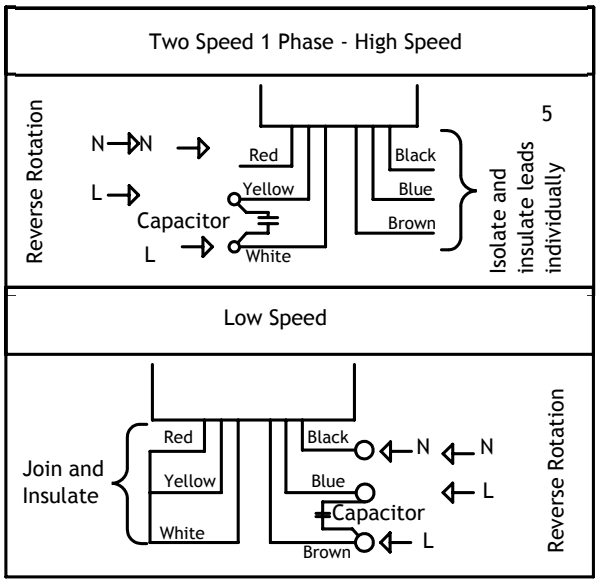


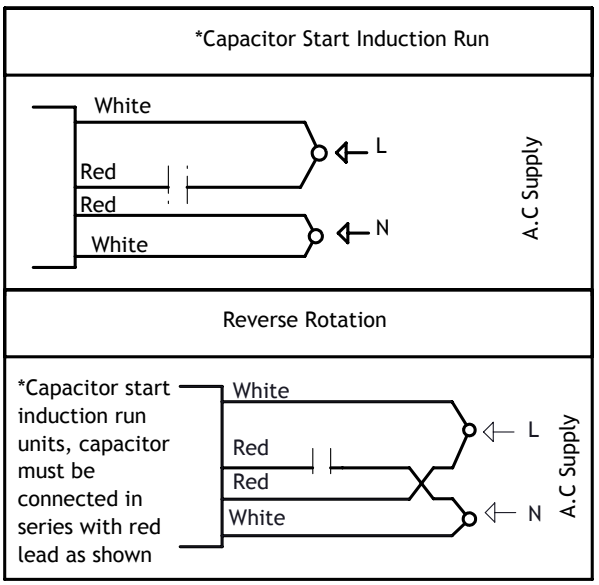
Motor Model	Available Enclosures			Available Mounting Frames		
	Ventilated (VENT) IP 20	Totally Enclosed (TENC) IP 54	Totally Enclosed Fan Cooled (TEFC) IP54	Parvalux Frame	IEC 56 Frame	IEC 63 Frame
SD21	✓	✓	X	✓	X	X
SD41	✓	✓	X	✓	X	X
SD8	✓	✓	✓	✓	X	X
SD28	✓	✓	✓	✓	✓	✓
SD13	✓	✓	✓	✓	✓	✓
SD48	✓	✓	✓	✓	✓	✓

Connection Diagram Single Phase Motors

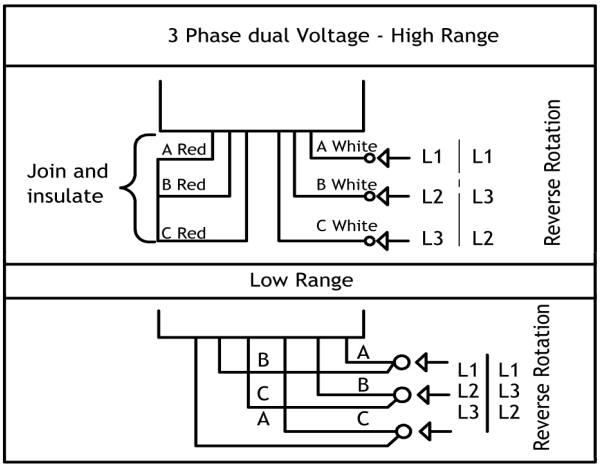


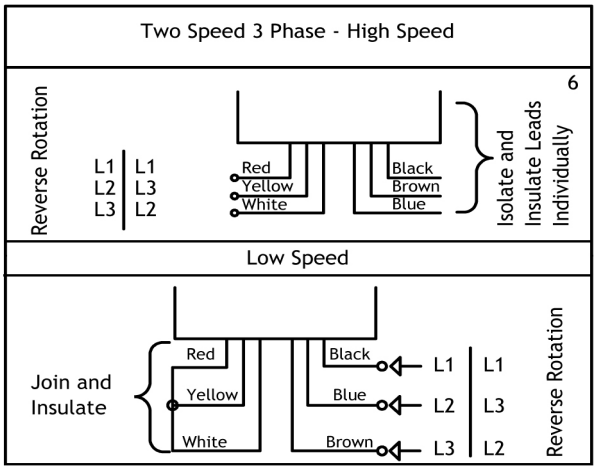






Connection Diagram Three Phase Motors





SD Series

2 Pole - 2800 rpm

Single Phase Permanent Capacitor, Asynchronous Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Capacitor		Available Enclosures
				240V	220V		240V	220V	
SD21	2800	20	85	0.34	0.3	80	2	2	VENT/TENC
SD41	2800	25	100	0.25	0.24	65	2.5	2.5	VENT/TENC
SD8	2800	60	75	0.57	0.53	127	4	4	VENT/TENC/TEFC
SD28	2800	100	85	0.76	0.75	185	6	6	VENT/TENC/TEFC
SD13	2800	150	80	1.2	1.2	290	8.4	8.4	VENT/TENC/TEFC
*SD48	2800	190	130	1.7	1.7	324	ELECTROLYTIC 40/50 MFD		VENT/TENC/TEFC

**SD48 Model figures based on capacitor start - induction run capacitor configured to model*

4 Pole - 1400 rpm

Single Phase Permanent Capacitor, Asynchronous Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Capacitor		Available Enclosures
				240V	220V		240V	220V	
SD21	1400	8	100	0.18	0.16	40	2.5	2.5	VENT/TENC
SD41	1400	10	100	0.2	0.19	40	3	3	VENT/TENC
SD8	1400	35	85	0.3	0.3	75	2.5	2.5	VENT/TENC/TEFC
SD28	1400	55	85	0.41	0.46	100	3	4	VENT/TENC/TEFC
SD13	1400	100	75	0.76	0.74	180	6	6	VENT/TENC/TEFC
*SD48	1400	125	175	1.5	1.5	250	ELECTROLYTIC		VENT/TENC
*SD48	1400	150	150	1.7	1.7	308	ELECTROLYTIC		TENC/TEFC

**SD48 Model figures based on capacitor start - induction run capacitor configured to model*

6 Pole - 900 rpm

Single Phase Permanent Capacitor, Asynchronous Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Capacitor		Available Enclosures
				240V	220V		240V	220V	
SD8	900	10	100	0.2	0.22	45	2	2	VENT/TENC/TEFC
SD13	900	38	100	0.46	0.43	119	4	4	VENT/TENC/TEFC

2 Speed

Single Phase Permanent Capacitor, Asynchronous Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Capacitor		Available Enclosures
				240V	220V		240V	220V	
SD8	1400/2800	30/50	50	0.43/0.47	0.4/0.48	85/110	6	6	VENT/TENC/TEFC
SD13	1400/2800	50/100	50	1.0/0.72	0.9/0.8	170/190	10	10	VENT/TENC/TEFC

1500 Rpm

Single Phase Permanent Capacitor, Synchronous Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Capacitor		Available Enclosures
				240V	220V		240V	220V	
SD8	1500	10	100	0.26	0.23	55	5	5	VENT/TENC/TEFC

SD Series

2 Pole - 2800 rpm

Three Phase Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Available Enclosures
				440V	380V		
SD41	2800	25	150%	0.14	0.12	58	VENT/TENC
SD8	2800	60	200%	0.24	0.22	105	VENT/TENC/TEFC
SD28	2800	120	150%	0.36	0.38	210	VENT/TENC/TEFC
SD13	2800	190	150%	0.46	0.45	273	VENT/TENC/TEFC
SD48	2800	250	150%	0.75	0.74	400	VENT/TENC/TEFC

4 Pole - 1400 rpm

Three Phase Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Available Enclosures
				440V	380V		
SD41	1400	10	150	0.14	0.12	47	VENT/TENC
SD8	1400	35	200	0.24	0.22	80	VENT/TENC/TEFC
SD28	1400	55	150	0.28	0.25	120	VENT/TENC/TEFC
SD13	1400	125	150	0.44	0.41	210	VENT/TENC/TEFC
SD48	1400	190	150	0.5	0.62	300	VENT/TENC/TEFC

6 Pole - 900 rpm

Three Phase Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Available Enclosures
				440V	380V		
SD8	900	15	100	0.2	0.17	80	VENT/TENC
SD13	900	60	150	0.31	0.29	130	VENT/TENC

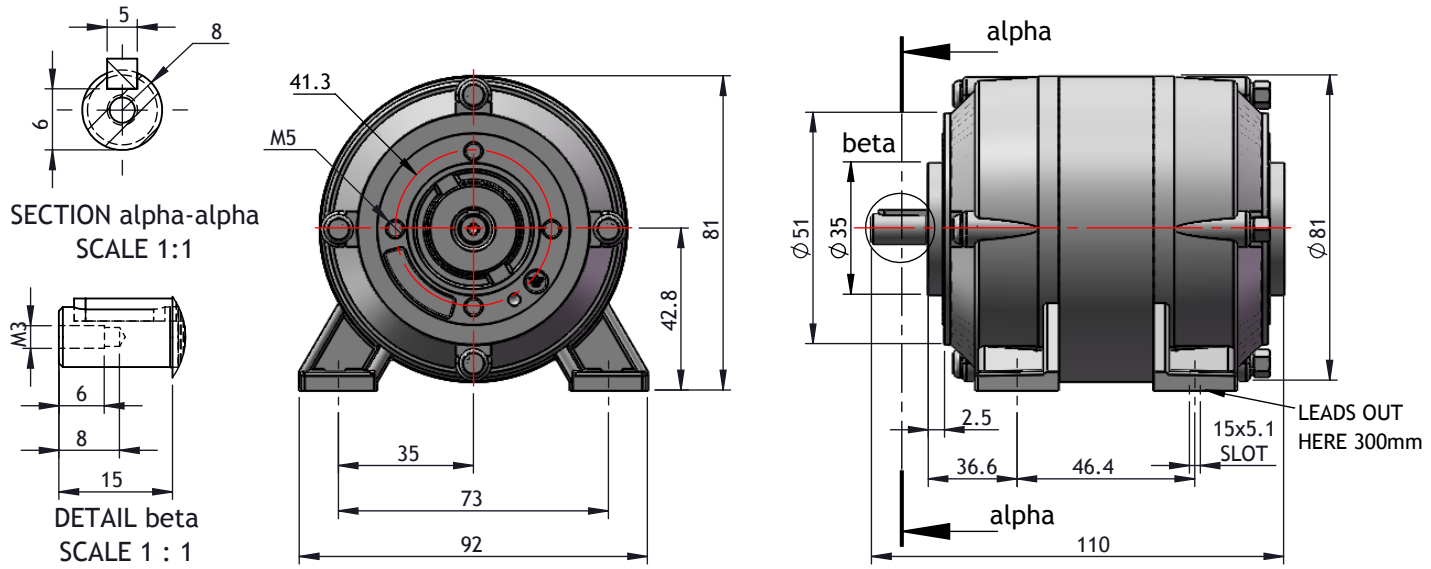
2 Speed

Three Phase Motors

Model	Speed (r/min)	Power (Watts)	Starting Torque Full Load	Current Amps		Input Watts	Available Enclosures
				440V	380V		
SD8	1400/2800	30/50	100	0.21/0.16	0.18/0.17	90	VENT/TENC/TEFC
SD13	1400/2800	50/100	150	0.38	0.32	120/160	VENT/TENC/TEFC

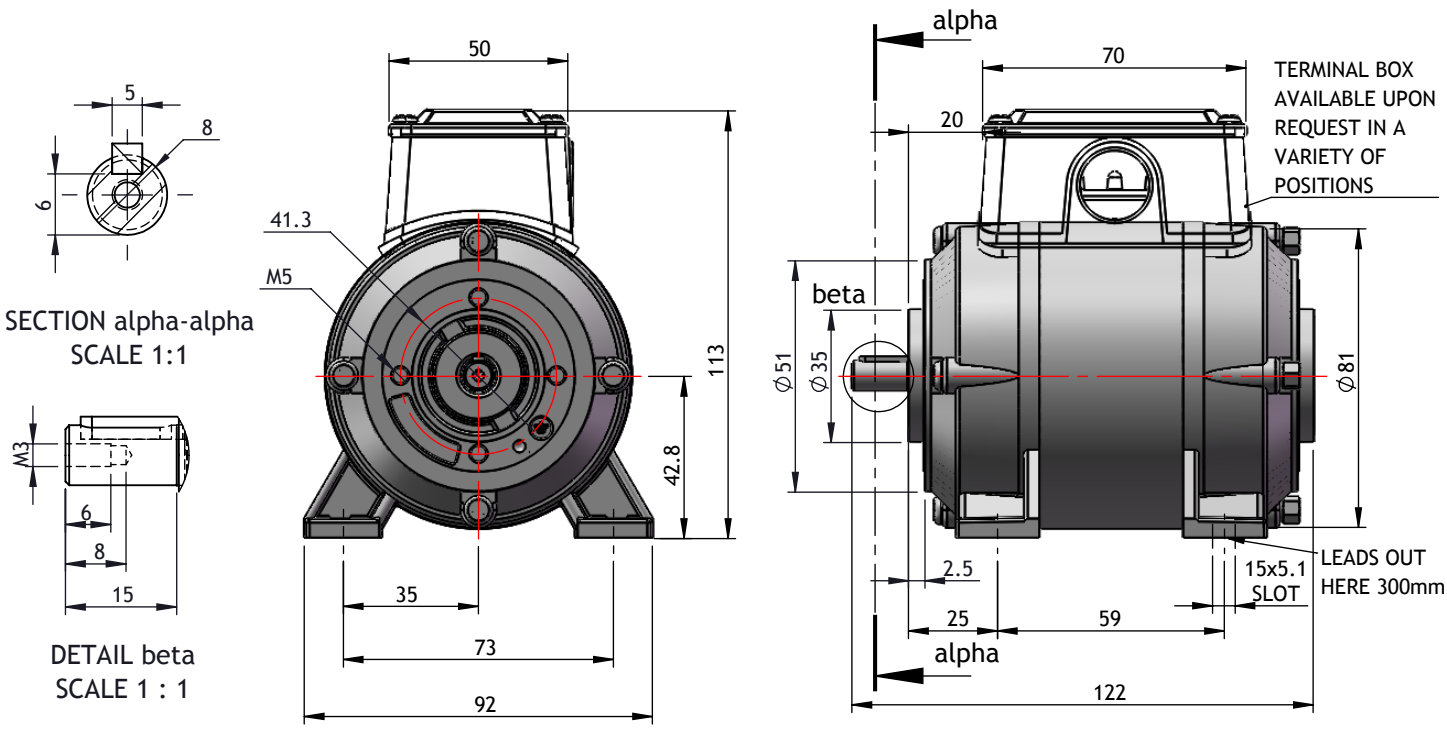
SD21 - VENT/TENC

Parvalux Frame Dimensions



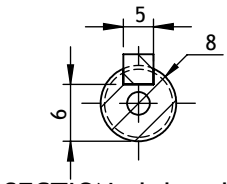
SD41 - VENT/TENC

Parvalux Frame Dimensions

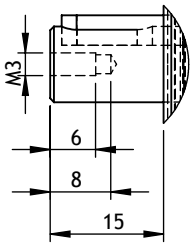


SD8 - VENT/TENC

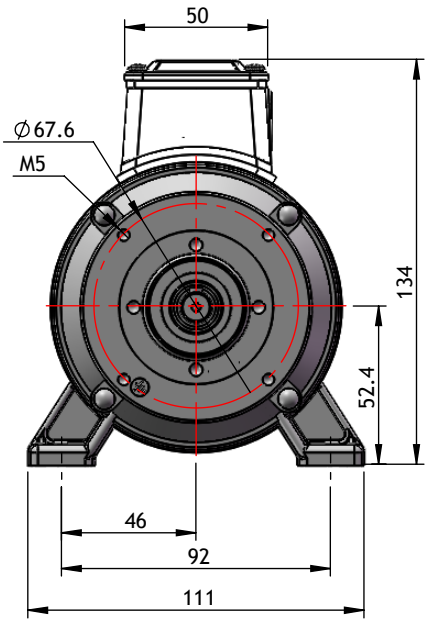
Parvalux Frame Dimensions

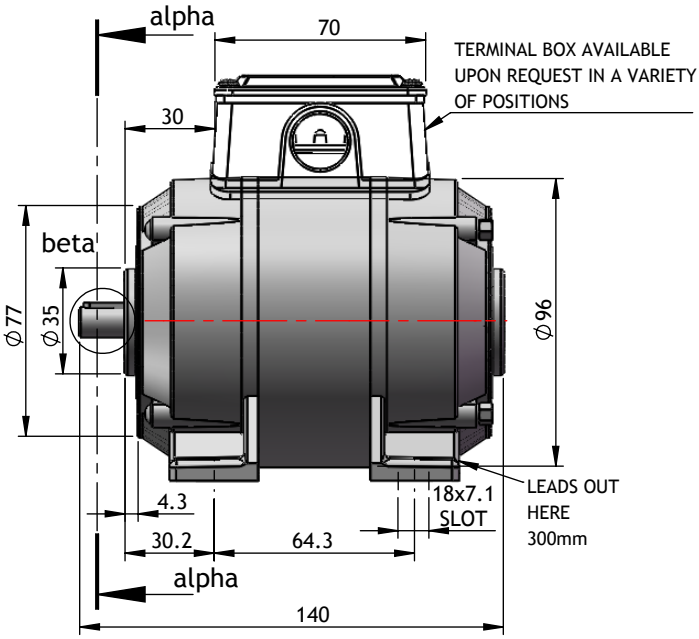


SECTION alpha-alpha
SCALE 1 : 1



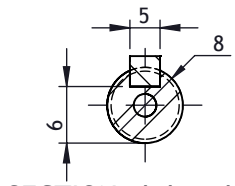
DETAIL beta
SCALE 1 : 1



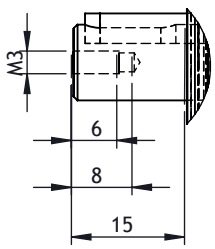


SD8 - TEFC

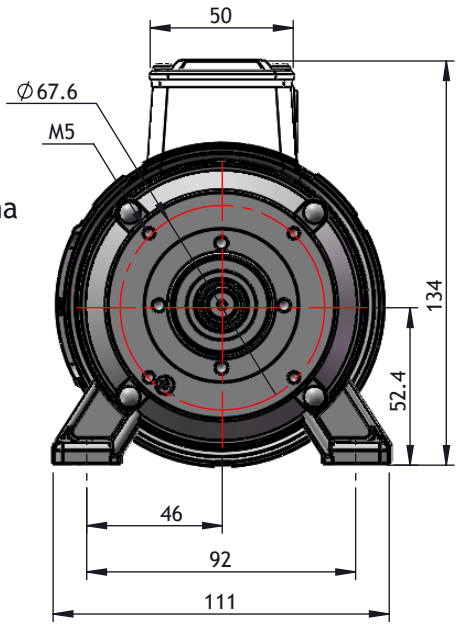
Parvalux Frame Dimensions

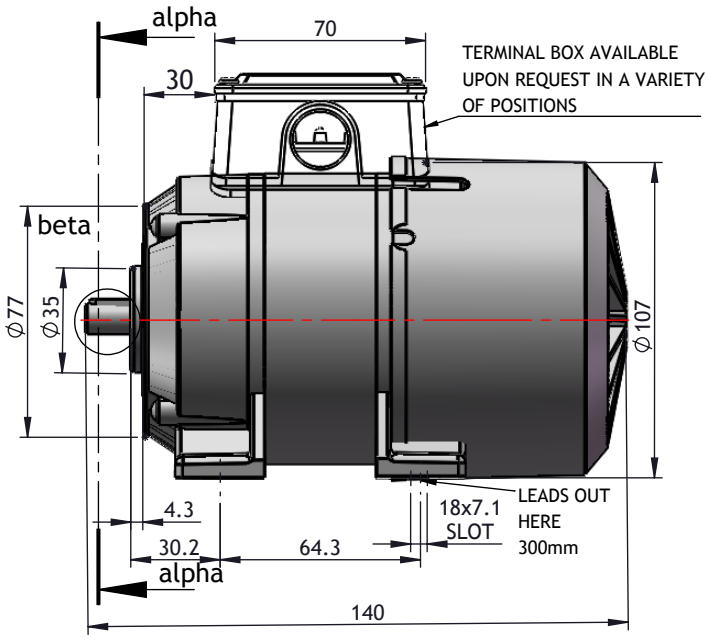


SECTION alpha-alpha
SCALE 1:1



DETAIL beta
SCALE 1 : 1

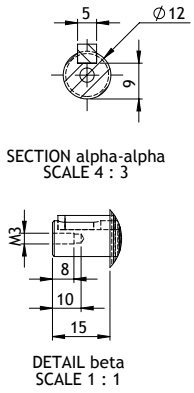


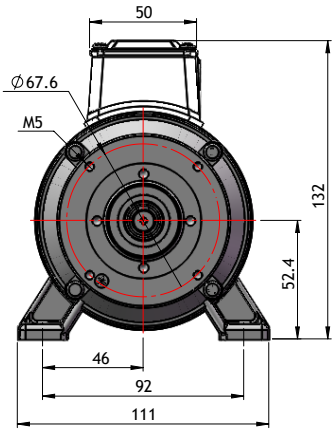


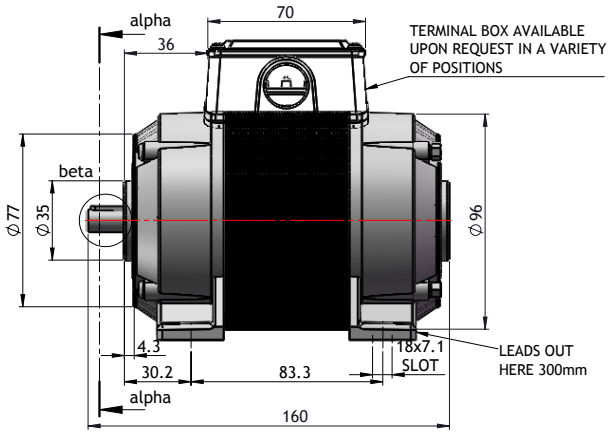
SD28 Series

Parvalux Frame

Ventilated/Totally Enclosed - Dimensions

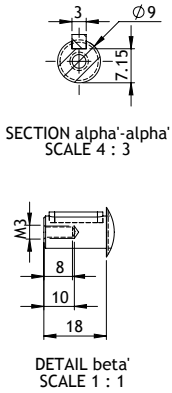


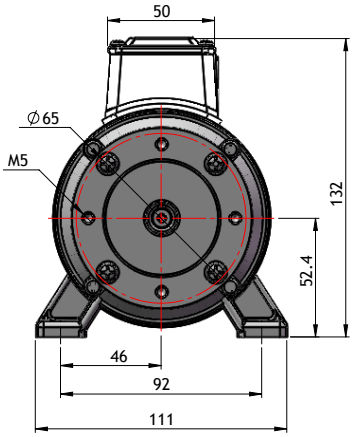


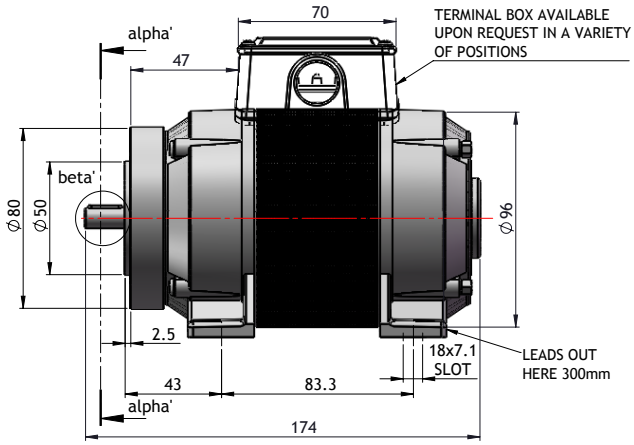


IEC 56 Frame

Ventilated/Totally Enclosed Dimensions

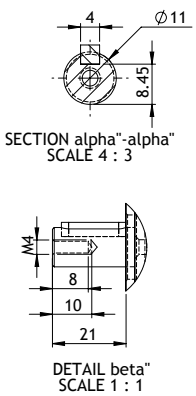


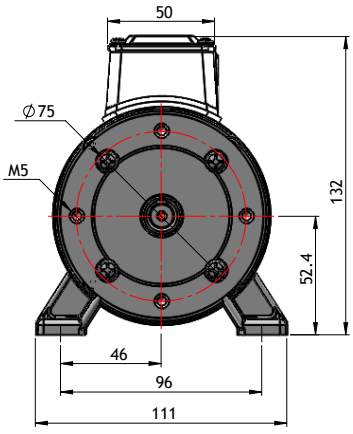


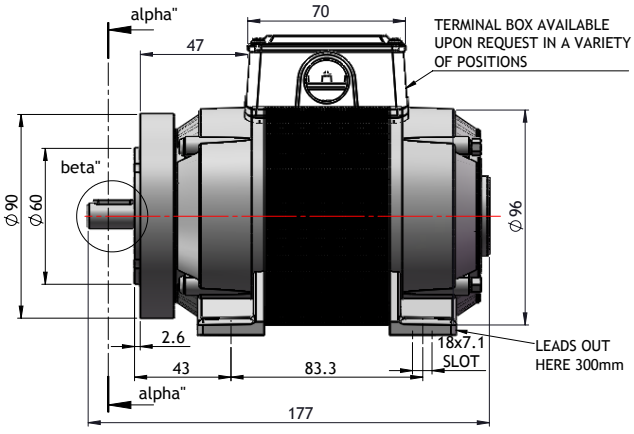


IEC 63 Frame

Ventilated/Totally Enclosed Dimensions

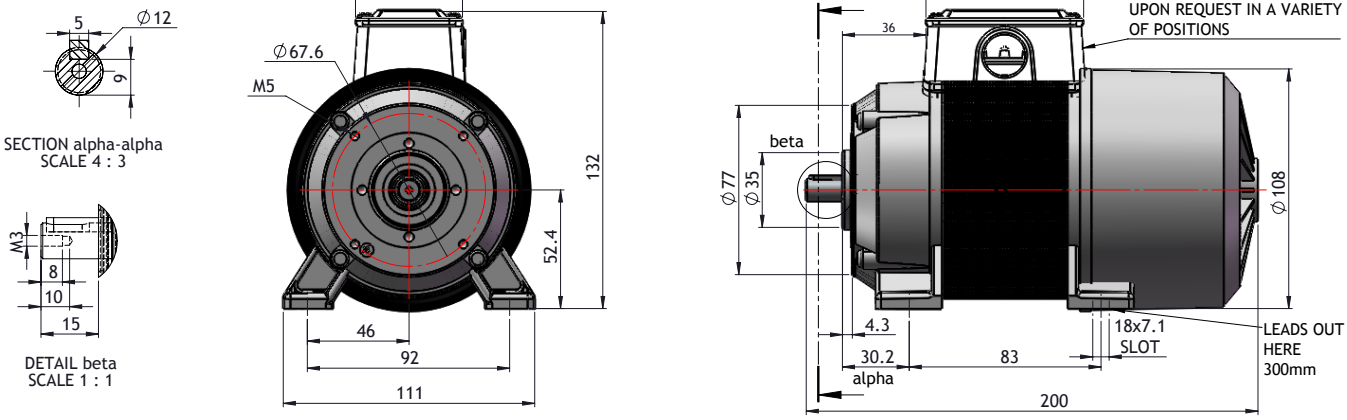






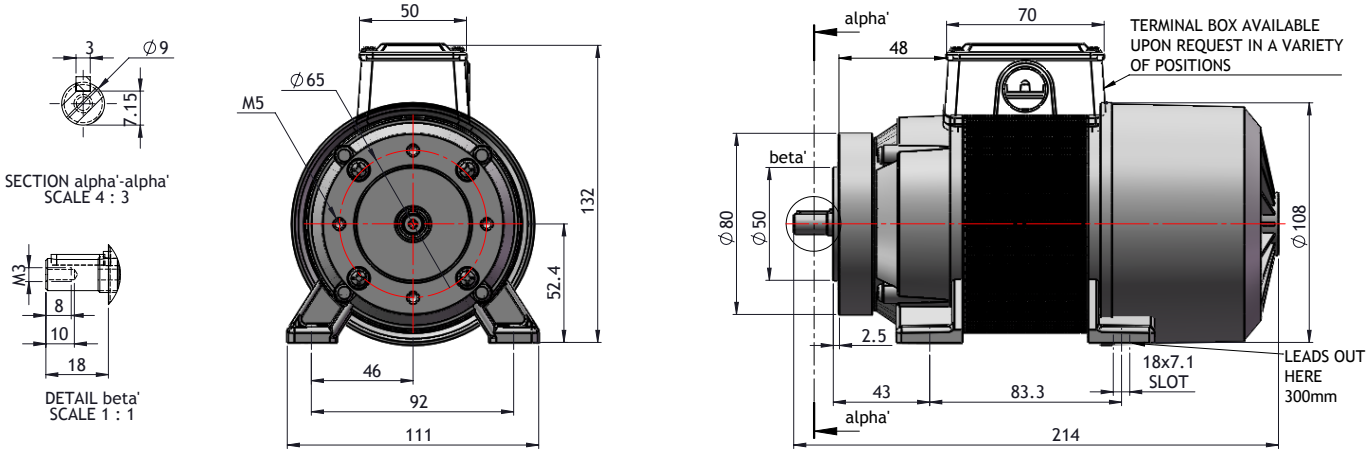
Parvalux Frame

Totally Enclosed Fan Cooled - Dimensions



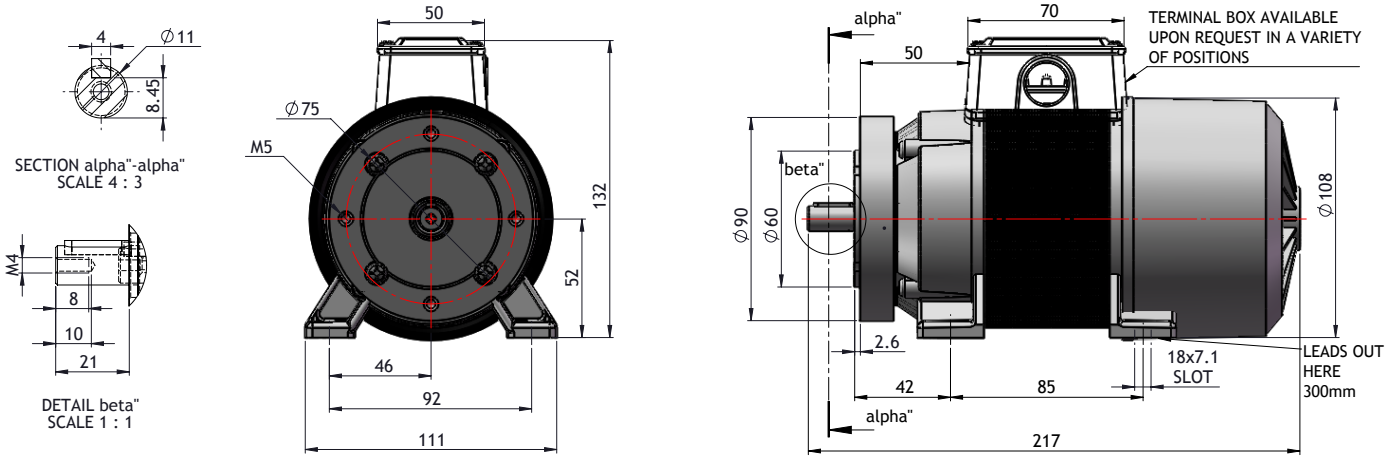
IEC 56 Frame

Totally Enclosed Fan Cooled - Dimensions



IEC 63 Frame

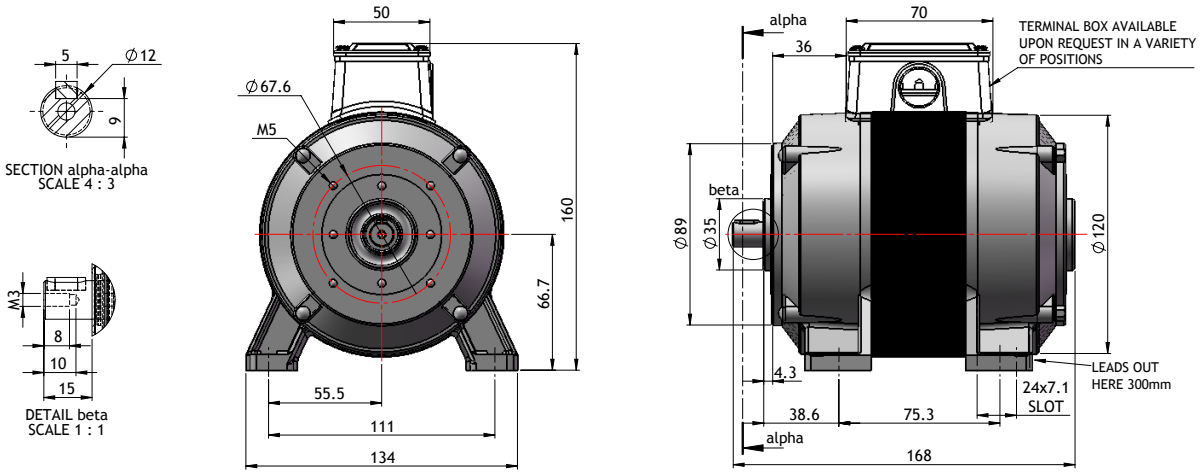
Totally Enclosed Fan Cooled - Dimensions



SD13 Series

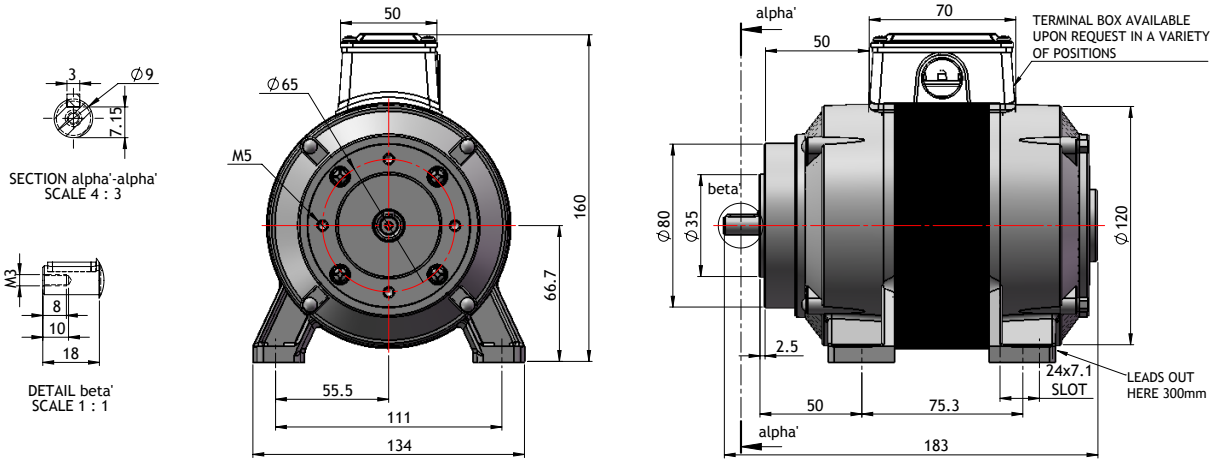
Parvalux Frame

Ventilated/Totally Enclosed - Dimensions



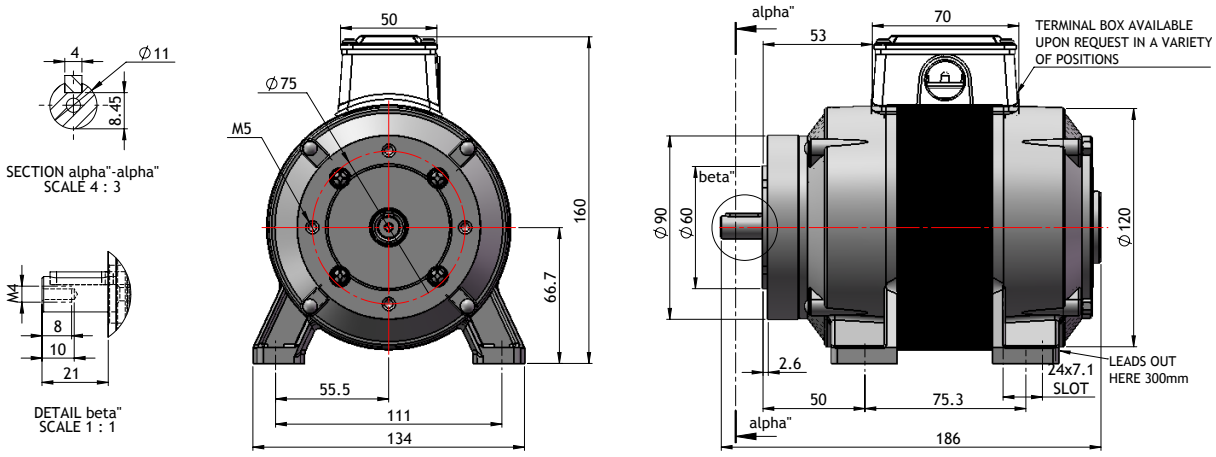
IEC 56 Frame

Ventilated/Totally Enclosed Dimensions



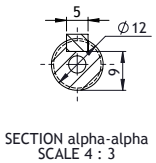
IEC 63 Frame

Ventilated/Totally Enclosed Dimensions

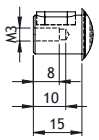


Parvalux Frame

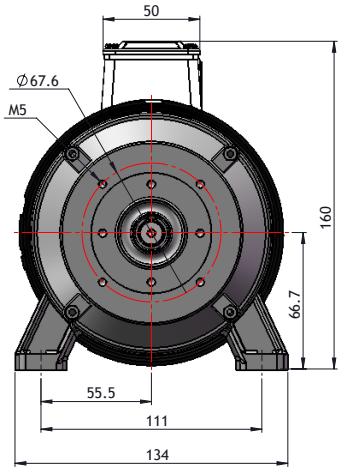
Totally Enclosed Fan Cooled - Dimensions

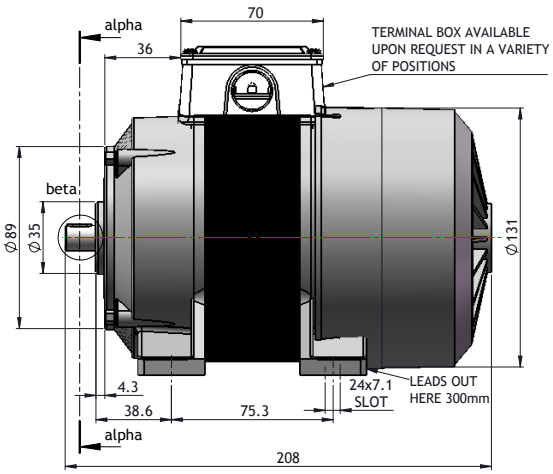


SECTION alpha-alpha
SCALE 4 : 3



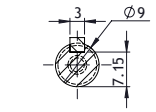
DETAIL beta
SCALE 1 : 1



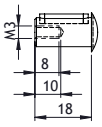


IEC 56 Frame

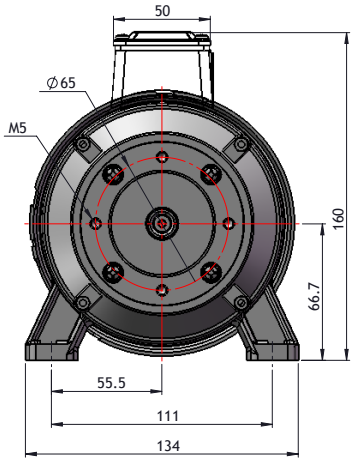
Totally Enclosed Fan Cooled - Dimensions

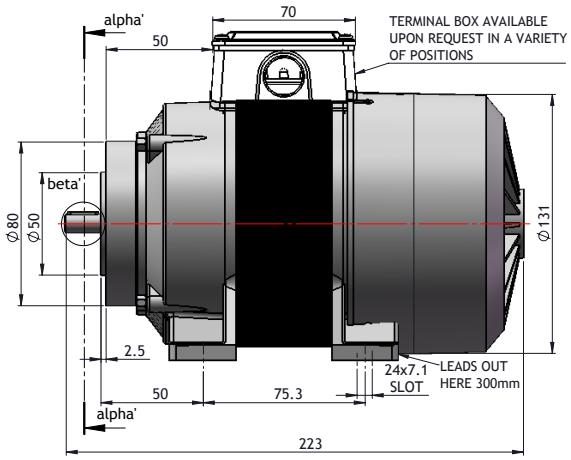


SECTION alpha'-alpha'
SCALE 4:3



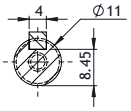
DETAIL beta'
SCALE 1 : 1



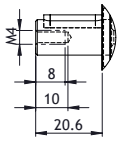


IEC 63 Frame

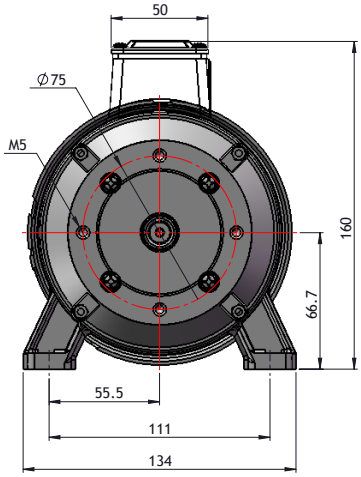
Totally Enclosed Fan Cooled - Dimensions

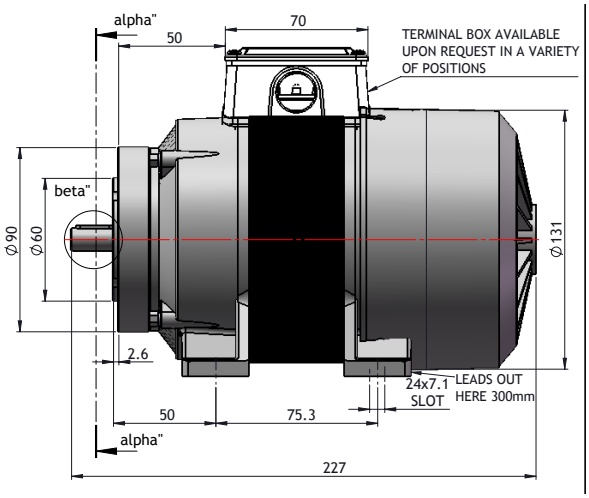


SECTION alpha"-alpha"
SCALE 4 : 3



DETAIL beta"
SCALE 1 : 1

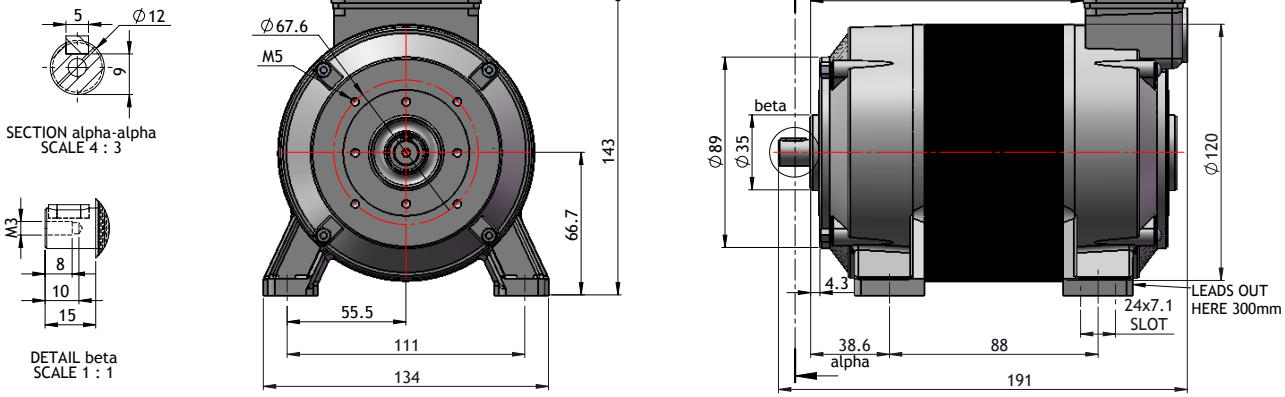




SD48 Series

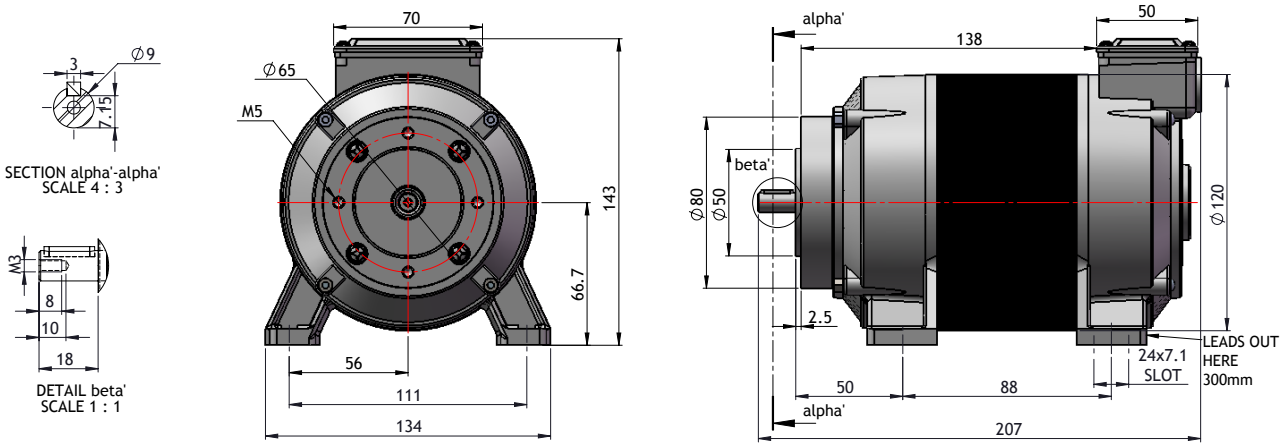
Parvalux Frame

Ventilated/Totally Enclosed - Dimensions



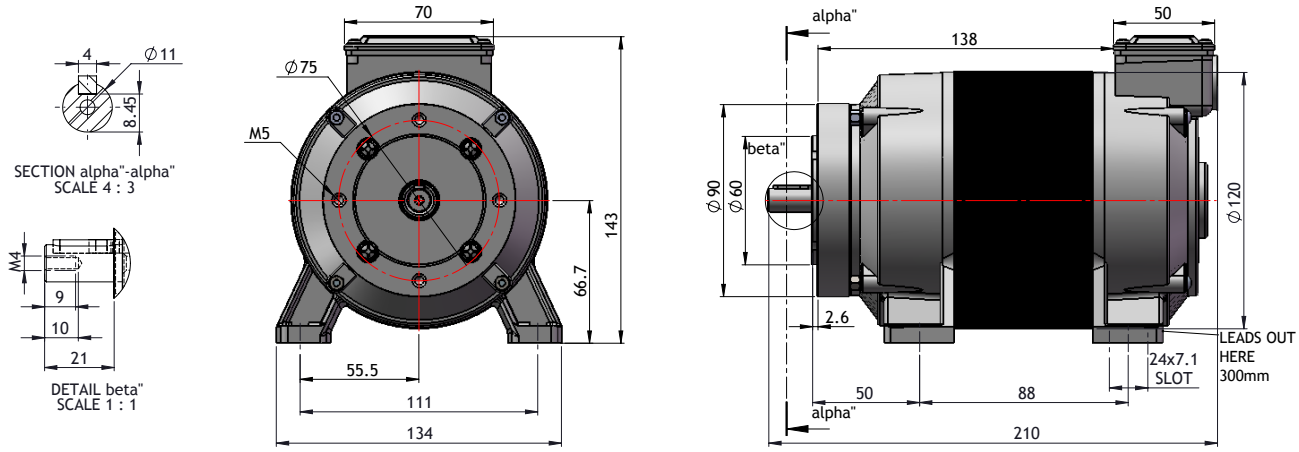
IEC 56 Frame

Ventilated/Totally Enclosed Dimensions



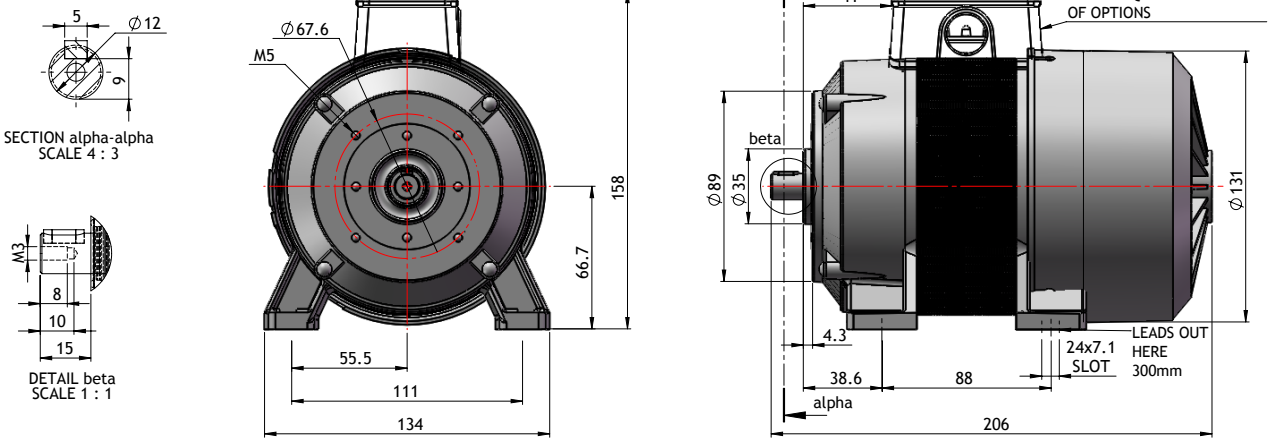
IEC 63 Frame

Ventilated/Totally Enclosed Dimensions



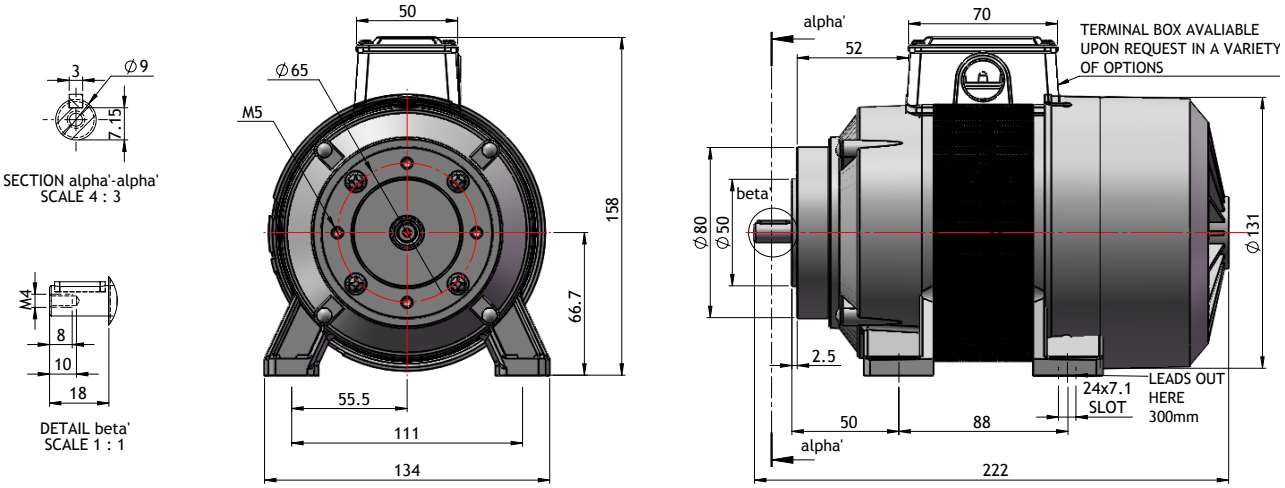
Parvalux Frame

Totally Enclosed Fan Cooled - Dimensions



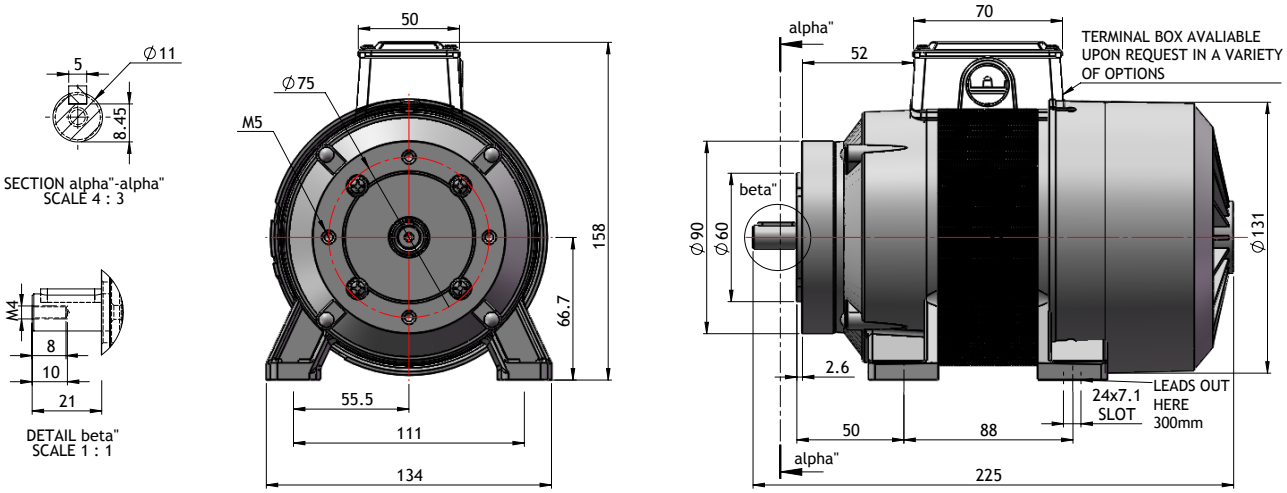
IEC 56 Frame

Totally Enclosed Fan Cooled - Dimensions



IEC 63 Frame

Totally Enclosed Fan Cooled - Dimensions

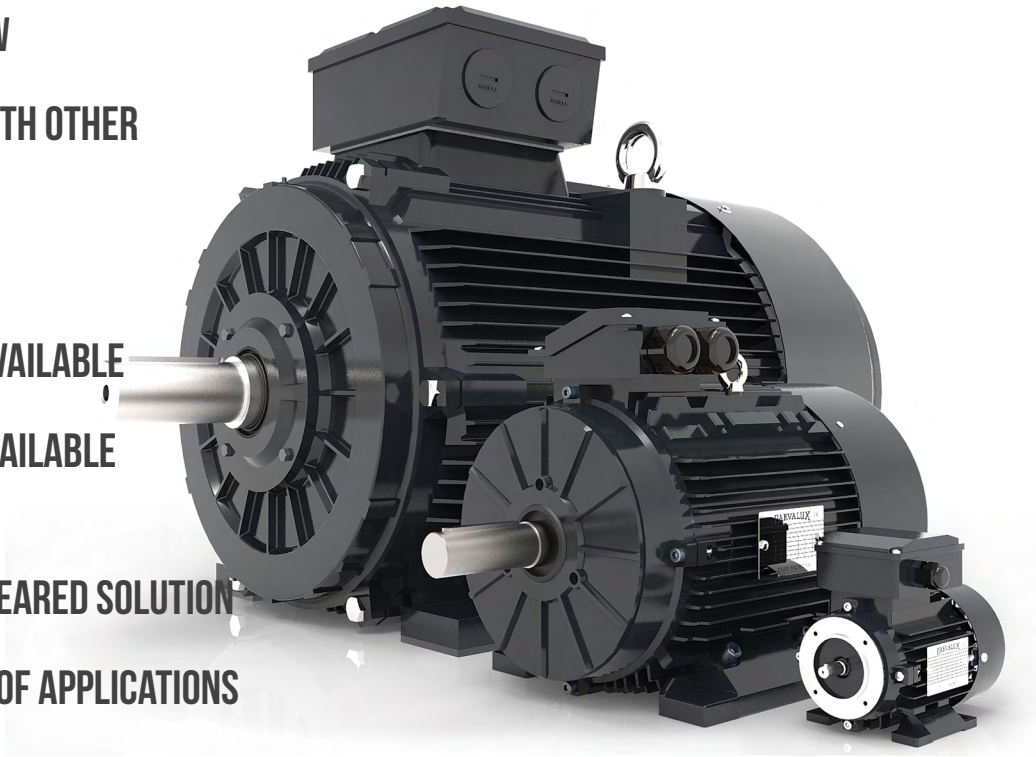


PARVALUX

OUR RANGE OF IEC STANDARD AC MOTORS

KEY FEATURES:

- SINGLE AND 3 PHASE MOTORS IN IEC STANDARD FRAMES
- MULTI MOUNT DESIGN - IN ALUMINIUM & CAST IRON HOUSINGS
- RANGE SUPPORTS IE2 & IE3 EFFICIENCY REQUIREMENTS
- 3 PHASE MOTORS FROM 0.09-315KW
- SINGLE PHASE PERMANENT CAPACITOR MOTORS FROM 0.09-3KW
- DUAL CAPACITOR MOTORS UP TO 4KW
- BRAKE MOTORS UP TO 18.5KW
- EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS
- SPEED CONTROLLABLE
- INCREASE OUTPUT MOTORS AVAILABLE
- NON STANDARD PRODUCTS AVAILABLE UPON REQUEST
- RANGE CONFIGURABLE AS A GEARED SOLUTION
- SUITABLE FOR A WIDE RANGE OF APPLICATIONS



FROM 0.09 - 315KW SINGLE & THREE PHASE MULTI MOUNT DESIGN IE2 & IE3 - EX STOCK

IEC FRAME RANGE OVERVIEW

SINGLE PHASE OVERVIEW

POWER RANGE	0.09-3KW PERMANENT CAPACITOR 0.18-4KW DUAL CAPACITOR
EFFICIENCY RATING	NO EFFICIENCY DIRECTIVE APPLIES TO RANGE
FRAME SIZES	56-112
POLE	2/4/6
VOLTAGES	100/120. 220/240V 50HZ
ENCLOSURE	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION CLASS:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

THREE PHASE OVERVIEW

POWER RANGE:	0.09-37KW ALUMINIUM 2.2-315KW CAST IRON
EFFICIENCY RATING:	IE1, IE2 & IE3 (STANDARD, HIGH & PREMIUM EFFIENCY)
FRAME SIZES:	56-200 ALUMINIUM 132-355 CAST IRON
POLES:	2/4/6/8
VOLTAGES:	0-3KW: 230/400V 3KW+: 400/690V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION CLASS:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

IEC FRAME
PRODUCT & PAGE LOOK UP

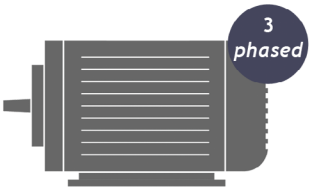
The table below acts a tool to aid identification of the motor series that is most applicable to your requirements and identifies its corresponding page number.

	Single-phase		3 Phase Aluminium				3 Phase Cast Iron	
Frame	Cap Start/ Run	Perm Cap	IE1	IE2	IE3	Brake	IE2	IE3
56	.	A1PC Series	A3 Series	.	.	.	.	.
63	A1DC Series	A1PC Series	A3 Series	.	.	A3B Series	.	.
71	A1DC Series	A1PC Series	A3 Series	.	.	A3B Series	.	.
80	A1DC Series	A1PC Series	A3 Series	A3 & A3H Series	A3H Series	A3B Series	.	.
90	A1DC Series	A1PC Series	A3 Series	A3 & A3H Series	A3H Series	A3B Series	.	.
100	A1DC Series	.	A3 Series	A3 & A3H Series	A3H Series	A3B Series	.	.
112	A1DC Series	.	.	A3 & A3H Series	A3H Series	A3B Series	.	.
132	.	.	.	A3 & A3H Series	A3H Series	A3B Series	C3 Series	C3 Series
160	.	.	.	A3 & A3H Series	A3H Series	A3B Series	C3 Series	C3 Series
180	.	.	.	A3 & A3H Series	A3H Series	.	C3 Series	C3 Series
200	.	.	.	A3 & A3H Series	A3H Series	.	C3 Series	C3 Series
225	.	.	.	.	.	.	C3 Series	C3 Series
250	.	.	.	.	.	.	C3 Series	C3 Series
280	.	.	.	.	.	.	C3 Series	C3 Series
315	.	.	.	.	.	.	C3 Series	C3 Series
355	.	.	.	.	.	.	C3 Series	C3 Series
Page	pg 36	pg 43	pg 51	pg 71	pg 74	pg 61	pg 82	pg 84

A PARVALUX GUIDE TO EU ENERGY EFFICIENCY REGULATIONS

It applies to:

newly installed



3 phased 50 or 50/60 Hz
Single speed, asynchronous
Squirrel cage induction motors

2, 4 OR 6

2, 4 or 6 pole

UPTO

1,000 V

rated voltage up to 1,000 V

0.75kW - 375kW

rated power 0.75kW to 375kW

motors in continuous duty operation

Mandatory across Europe from

1 JANUARY 2015

No Legislation

IE2

IE3
OR
IE2

if fitted with a Variable Speed Drive

1 JANUARY 2017

No Legislation

IE3
OR
IE2

if fitted with a Variable Speed Drive

EXCEPTIONS

:: Motors completely immersed in a liquid during operation
:: Motors that are fully integrated into a machine
:: Brake motors
:: Motors specially designed for operation under the following conditions:

>4,000 m above sea level

Ambient temperature
> 60˚C

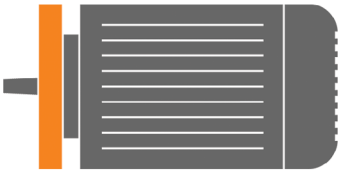
Ambient temperature
<-30˚C or
<0˚C with air cooling

Cooling liquid temperatures
< 0˚C or > 32˚C

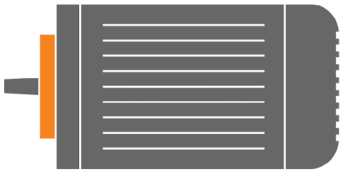
A GUIDE TO MOUNTING POSITIONS

Our motors can be specified in various mounting positions, the illustrations below summarise the available options. Please ensure when specifying a motor to select the appropriate mounting position.

B3 - FOOT MOUNTED



B5 - LARGE FLANGE MOUNTED



B14 - FACE MOUNTED

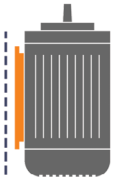
B35 - FOOT & LARGE FLANGE MOUNTED

B34 - FOOT & FACE MOUNTED

FOOT MOUNT OPTIONS

B3 (IM1001)

V5 (IM1011)



V6 (IM1031)

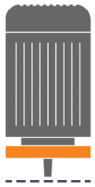
B6 (IM1051)

B7 (IM1061)

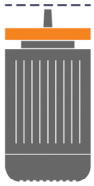
B8 (IM1071)

LARGE FLANGE MOUNT OPTIONS

B5 (IM3001)



V1 (IM3011)



V3 (IM3031)

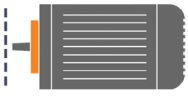
LARGE FLANGE & FEET MOUNT OPTIONS

B35 (IM2001)

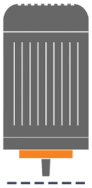
V1/5 (IM2011)

V3/6 (IM2031)

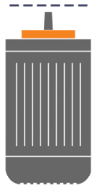
FACE MOUNT OPTIONS



B14 (IM3601)



V18 (IM3611)



V19 (IM3631)

FACE & FEET MOUNT OPTIONS

B34 (IM2101)

V5/18 (IM2111)

V6/9 (IM2131)

IEC FRAME GUIDE - AVAILABLE MOUNTING POSITIONS

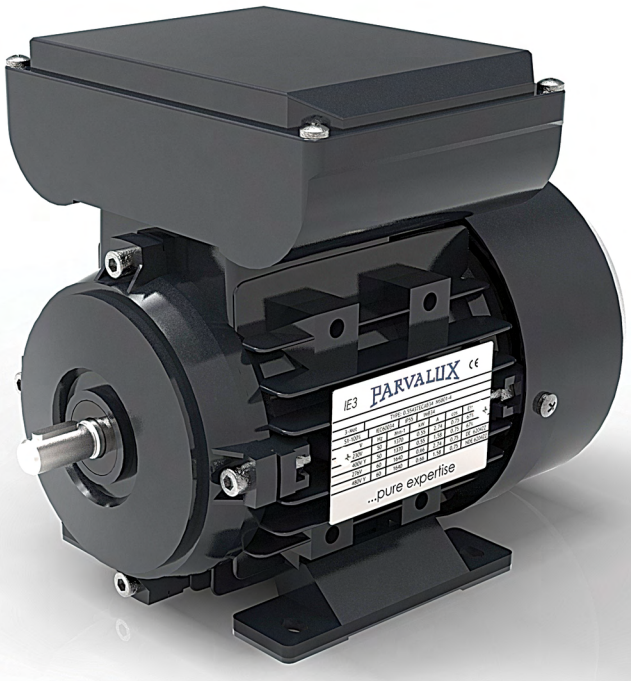
The table below summarises each frame size available mounting positions motors can be configured to.

Available Frame Mounting Positions																
Mounting Position	Motor Frame															
	56	63	71	80	90	100	112	132	160	180	200	225	250	280	315	355
B3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
B35	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
B5	✔	✔	✔	✔	✔	✔	✔	✔	✔							
B6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		
B7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
B8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
B14	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
V1/V5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V3/V6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V5/V18	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V6	✔	✔	✔	✔	✔	✔	✔	✔	✔							
V6/V19	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
V18	✔	✔	✔	✔	✔	✔	✔	✔	✔							
V19	✔	✔	✔	✔	✔	✔	✔	✔	✔							

A1CSR SERIES

KEY FEATURES:

- SINGLE PHASED CAPACITOR START/RUN MOTORS
- IN IEC STANDARD FRAMES
- MUTLI MOUNT DESIGN - ALUMINIUM HOUSINGS
- ASYNCHRONOUS SINGLE SPEED
- EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS
- IMPROVED STARTING TORQUE
- SUITABLE FOR APPLICATIONS WHERE STARTING TORQUE REQUIREMENTS ARE 1.8-2.5 TIMES FULL LOAD TORQUE
- AVAILABLE IN FRAME SIZES 63-112



SINGLE PHASE DUAL CAPACITOR
AC MOTORS IN IEC FRAMES - 0.18-4KW

RANGE OVERVIEW

POWER RANGE:	0.18-4 KW
PHASE:	SINGLE PHASE, CAP START/RUN
EFFICIENCY RATING:	NO LEGISLATION FOR PRODUCT RANGE
FRAME SIZES:	63-112
POLES:	2/4
VOLTAGES:	110 & 230V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION CLASS:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

2 Pole - 2800 rpm

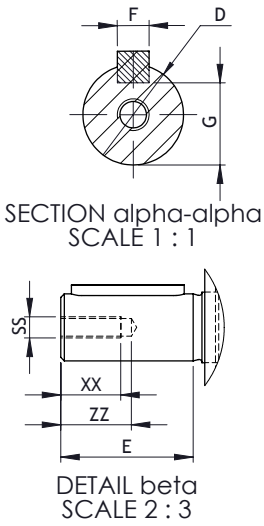
IEC Single Phased Dual Capacitor Asynchronous Motors

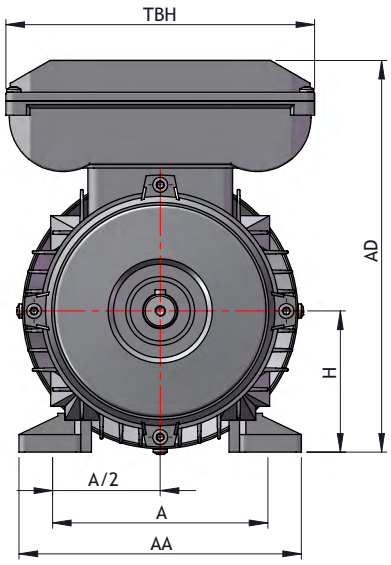
MODEL	FRAME	Power (KW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (Cos□)	Rate Torque (N.M)	Tst/ Tn (Times)	T max/ Tn (Times)	Starting Current (A)	Run Capacitor (μF/V)	Start Capacitor (μF/V)	Noise Db (A)	Weight (KG)
230V Electrical Data														
A1-1-2-	63-1	0.18	1.38	2710	63	0.9	0.63	2.5	1.6	8	10μF/450V	30μF/250V	70	3.9
A1-1-2-	63-2	0.25	1.89	2710	64	0.9	0.88	2.5	1.6	10	12μF/450V	40μF/250V	73	4.4
A1-1-2-	71-1	0.37	2.66	2780	67	0.93	1.27	2.5	1.8	15	12μF/450V	75μF/250V	75	6.1
A1-1-2-	71-2	0.55	3.78	2790	68	0.93	1.88	2.5	1.8	20	16μF/450V	100μF/250V	76	7
A1-1-2-	80-1	0.75	4.87	2800	72	0.93	2.56	2.5	1.8	30	20μF/450V	100μF/250V	76	9
A1-1-2-	80-2	1.1	7.04	2810	73	0.93	3.74	2.5	1.8	40	30μF/450V	150μF/250V	79	10.3
A1-1-2-	90-S	1.5	9.48	2810	74	0.93	5.1	2.5	1.8	55	40μF/450V	200μF/300V	84	16.3
A1-1-2-	90-L	2.2	13.57	2810	75	0.94	7.48	2.5	1.8	75	50μF/450V	250μF/300V	84	16.7
A1-1-2-	100-L	3	17.83	2830	77	0.95	10.13	2.5	1.7	110	60μF/450V	400μF/300V	88	25
A1-1-2-	112-M1	3.7	21.48	2850	78	0.96	12.4	2.5	1.7	140	60μF/450V	600μF/300V	90	33
A1-1-2-	112-M2	4	22.18	2850	80	0.98	13.41	2.5	1.7	150	60μF/450V	600μF/300V	90	34.2
110V Electrical Data														
A1-1-2-	63-1	0.18	2.89	2710	63	0.9	0.63	1.8	1.6	16	30μF/250V	100μF/125V	70	4.2
A1-1-2-	63-2	0.25	3.95	2710	64	0.9	0.88	1.8	1.6	20	40μF/250V	100μF/125V	73	4.7
A1-1-2-	71-1	0.37	5.4	2780	67	0.93	1.27	2	1.8	30	40μF/250V	200μF/125V	75	5.3
A1-1-2-	71-2	0.55	7.68	2790	70	0.93	1.88	2	1.8	40	60μF/250V	300μF/125V	76	7.4
A1-1-2-	80-1	0.75	9.97	2800	72	0.95	2.56	2.5	1.8	60	80μF/250V	400μF/125V	76	9.5
A1-1-2-	80-2	1.1	14.04	2810	75	0.95	3.74	2.5	1.8	80	100μF/250V	600μF/125V	79	11.2
A1-1-2-	90-S	1.5	18.89	2810	76	0.95	5.1	2.5	1.8	110	140μF/250V	800μF/125V	84	14
A1-1-2-	90-L	2.2	27.34	2810	77	0.95	7.48	2.5	1.8	150	160μF/250V	1000μF/125V	84	17
A1-1-2-	100-L	3	36.34	2830	79	0.95	10.13	2.5	1.7	220	180μF/250V	1400μF/125V	88	25

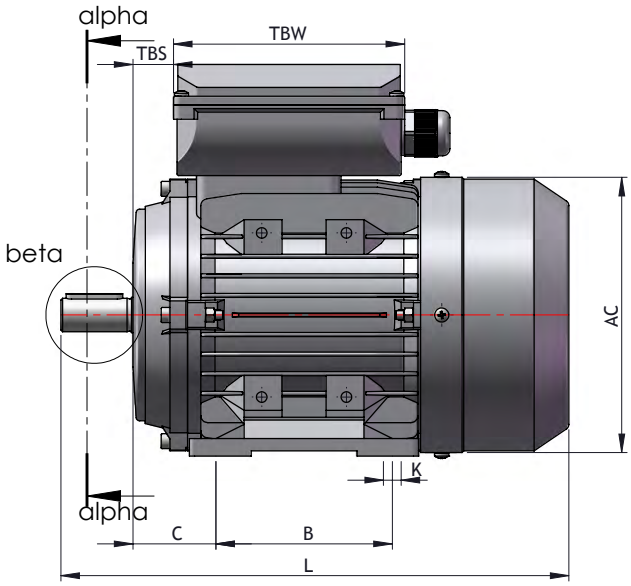
4 Pole - 1400 rpm

MODEL	FRAME	Power (KW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (Cos□)	Rate Torque (N.M)	Tst/ Tn (Times)	T max/ Tn (Times)	Starting Current (A)	Run Capacitor (μF/V)	Start Capacitor (μF/V)	Noise Db (A)	Weight (KG)
230V Electrical Data														
A1-1-4-	63-1	0.12	1.05	1350	55	0.9	0.85	2.5	1.6	6	10μF/450V	30μF/250V	64	4.1
A1-1-4-	63-2	0.18	1.55	1350	56	0.9	1.27	2.5	1.6	8.5	12μF/450V	40μF/250V	64	4.5
A1-1-4-	71-1	0.25	2.01	1380	60	0.9	1.73	2.5	1.7	10	12μF/450V	50μF/250V	66	5.9
A1-1-4-	71-2	0.37	2.84	1380	63	0.9	2.56	2.5	1.7	15	16μF/450V	75μF/250V	68	6.9
A1-1-4-	80-1	0.55	4.03	1400	66	0.9	3.75	2.5	1.8	20	20μF/450V	100μF/250V	71	9.6
A1-1-4-	80-2	0.75	5.25	1410	69	0.9	5.08	2.5	1.8	30	25μF/450V	100μF/250V	71	10.9
A1-1-4-	90-S	1.1	7.24	1410	71	0.93	7.45	2.5	1.8	40	35μF/450V	150μF/250V	74	13.8
A1-1-4-	90-L	1.5	9.61	1400	73	0.93	10.24	2.5	1.8	55	40μF/450V	200μF/300V	79	16.7
A1-1-4-	100-L	2.2	13.9	1430	74	0.93	14.7	2.5	1.8	75	50μF/450V	300μF/300V	79	22.8
A1-1-4-	100-L2	3	18.7	1440	75	0.93	19.91	2.5	1.8	110	60μF/450V	500μF/300V	83	28.7
A1-1-4-	112-M1	3.7	21.99	1440	77	0.95	24.55	2.5	1.7	140	60μF/450V	600μF/300V	86	31
A1-1-4-	112-M2	4	22.41	1440	80	0.97	26.54	2.5	1.7	150	60μF/450V	600μF/300V	86	32.8
110V Electrical Data														
A1-1-4-	63-1	0.12	2.2	1350	55	0.9	0.86	2.5	1.6	12	30μF/250V	100μF/125V	64	4.1
A1-1-4-	63-2	0.18	3.25	1350	56	0.9	1.27	1.8	1.6	17	40μF/250V	100μF/125V	64	4.4
A1-1-4-	71-1	0.25	4.21	1380	60	0.9	1.73	1.8	1.7	20	40μF/250V	150μF/125V	66	5.9
A1-1-4-	71-2	0.37	5.93	1380	63	0.9	2.56	2	1.7	30	40μF/250V	200μF/125V	68	6.9
A1-1-4-	80-1	0.55	8.42	1400	66	0.9	3.75	2	1.8	40	70μF/250V	300μF/125V	71	9.6
A1-1-4-	80-2	0.75	10.98	1410	69	0.9	5.08	2.5	1.8	60	90μF/250V	400μF/125V	71	10.8
A1-1-4-	90-S	1.1	14.73	1410	73	0.93	7.45	2.5	1.8	80	120μF/250V	600μF/125V	74	13.5
A1-1-4-	90-L	1.5	19.81	1400	74	0.93	10.24	2.5	1.8	110	140μF/250V	800μF/125V	79	16.5
A1-1-4-	100-L	2.2	28.3	1430	76	0.93	14.7	2.5	1.8	150	170μF/250V	1300μF/125V	79	24
A1-1-4-	100-L2	3	38.09	1440	77	0.93	19.91	2.5	1.8	220	200μF/250V	1600μF/125V	83	30

B3 - Foot Mounted Dimensions

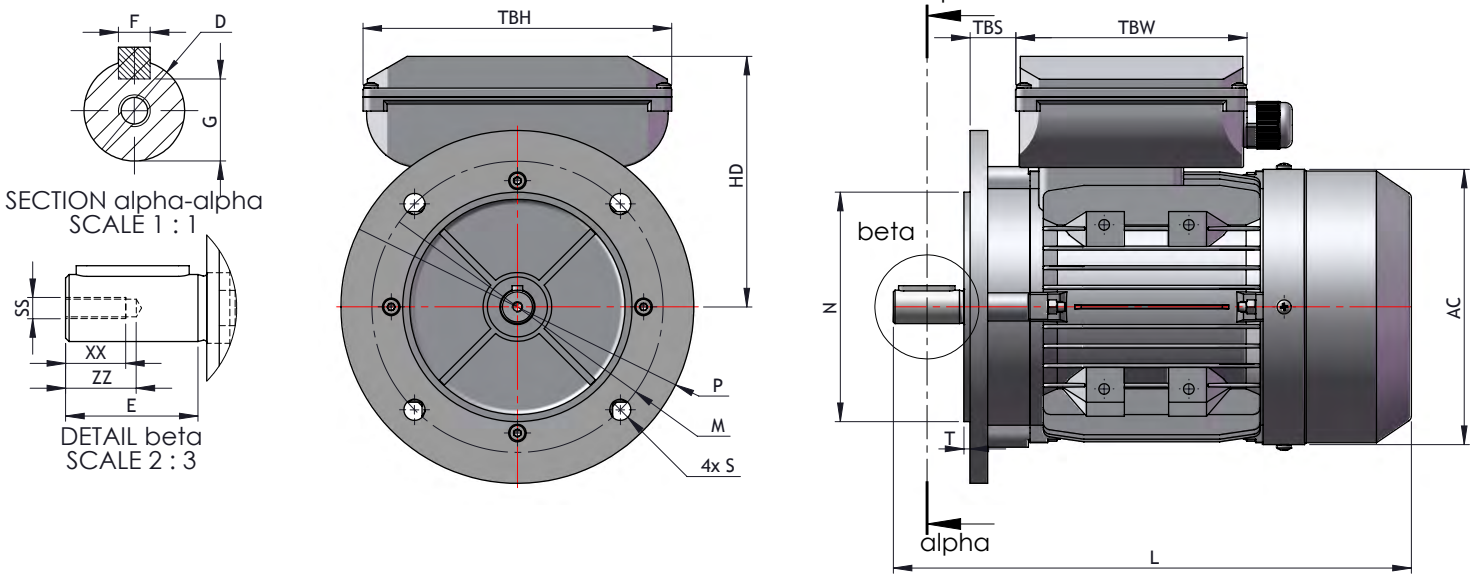






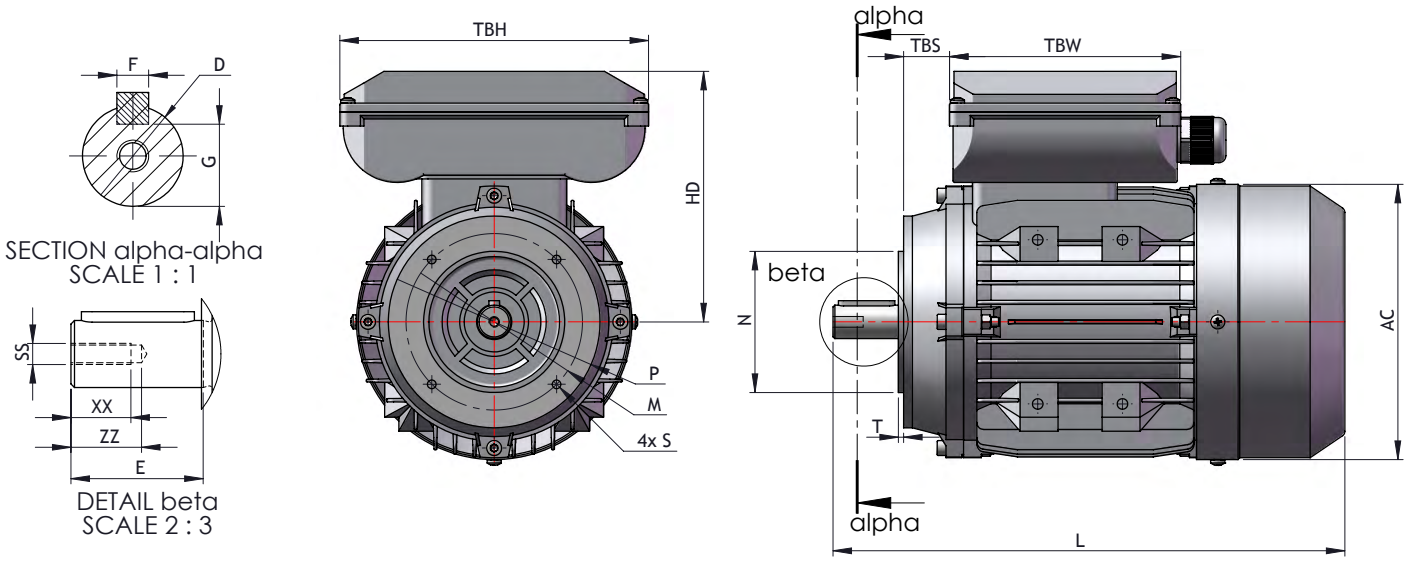
Frame Size	B3							Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	L	AC	HD	D	E	F	G	SS	XX	ZZ
63	100	80	40	63	7X10	120	179	212	Ø 130	116	11	23	4	8.5	M4	10	15
71	112	90	45	71	7X10	132	194	255	Ø 145	123	14	30	5	11	M5	12	18
80	125	100	50	80	10X13	157	223	290	Ø 165	143	19	40	6	15.5	M6	16	22
90S	140	100	56	90	10X13	172	240	335	Ø 185	150	24	50	8	20	M8	20	25
90L	140	125	56	90	10X13	172	240	365	Ø 185	150	24	50	8	20	M8	20	25
100L1	160	140	63	100	12X15	196	260	398	Ø 205	160	28	60	8	24	M10	22	28
100L2	160	140	63	100	12X15	196	260	416	Ø 205	160	28	60	8	24	M10	22	28
112M	190	140	70	112	12X15	222	295	416	Ø 230	183	28	60	8	24	M10	22	28

B5 - Large Flange Mounted Dimensions



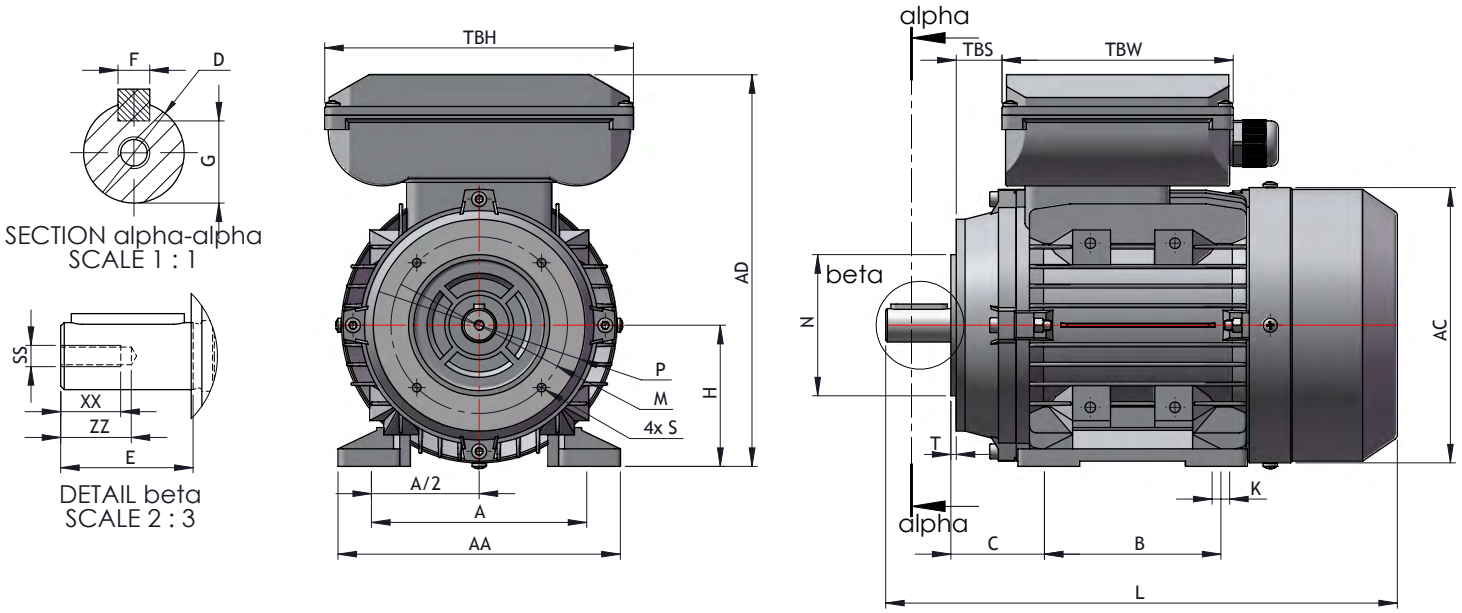
Frame Size	B5						Overall Dimensions			Shaft						
	M	N	P	R	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
63	Ø 115	Ø 95	Ø 140	0	Ø 10	3	212	Ø 130	116	11	23	4	8.5	M4	10	15
71	Ø 130	Ø 110	Ø 160	0	Ø 10	3.5	255	Ø 145	123	14	30	5	11	M5	12	18
80	Ø 165	Ø 130	Ø 200	0	Ø 12	3.5	290	Ø 165	143	19	40	6	15.5	M6	16	22
90S	Ø 165	Ø 130	Ø 200	0	Ø 12	3.5	335	Ø 185	150	24	50	8	20	M8	20	25
90L	Ø 165	Ø 130	Ø 200	0	Ø 12	3.5	365	Ø 185	150	24	50	8	20	M8	20	25
100L1	Ø 215	Ø 180	Ø 250	0	Ø 15	4	398	Ø 205	160	28	60	8	24	M10	22	28
100L2	Ø 215	Ø 180	Ø 250	0	Ø 15	4	416	Ø 205	160	28	60	8	24	M10	22	28
112M	Ø 215	Ø 180	Ø 250	0	Ø 15	4	416	Ø 230	183	28	60	8	24	M10	22	28

B14 - Face Mounted Dimensions



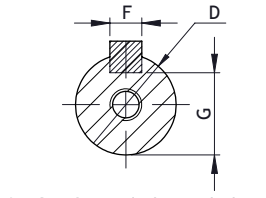
Frame Size	B14							Overall Dimensions			Shaft						
	M	N	P	R	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ	ZZ
63	Ø 75	Ø 60	Ø 90	0	M5	2.5	212	Ø 130	116	11	23	4	8.5	M4	10	15	15
71	Ø 85	Ø 70	Ø 105	0	M6	2.5	255	Ø 145	123	14	30	5	11	M5	12	18	18
80	Ø 100	Ø 80	Ø 120	0	M6	3	290	Ø 165	143	19	40	6	15.5	M6	16	22	22
90S	Ø 115	Ø 95	Ø 140	0	M8	3	335	Ø 185	150	24	50	8	20	M8	20	25	25
90L	Ø 115	Ø 95	Ø 140	0	M8	3	365	Ø 185	150	24	50	8	20	M8	20	25	25
100L1	Ø 130	Ø 110	Ø 160	0	M8	3.5	398	Ø 205	160	28	60	8	24	M10	22	28	28
100L2	Ø 130	Ø 110	Ø 160	0	M8	3.5	416	Ø 205	160	28	60	8	24	M10	22	28	28
112M	Ø 130	Ø 110	Ø 160	0	M8	3.5	416	Ø 230	183	28	60	8	24	M10	22	28	28

B34 - Face & Feet Mounted Dimensions

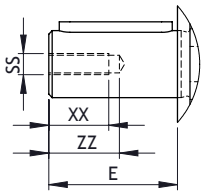


Frame Size	B34													Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	M	N	P	R	S	T	L	AC	HD	E	F	G	SS	XX	ZZ	ZZ
63	100	80	40	63	7X10	120	179	Ø 75	Ø 60	Ø 90	0	M5	2.5	212	Ø 130	116	23	4	8.5	M4	10	15	15
71	112	90	45	71	7X10	132	194	Ø 85	Ø 70	Ø 105	0	M6	2.5	255	Ø 145	123	30	5	11	M5	12	18	18
80	125	100	50	80	10X13	157	223	Ø 100	Ø 80	Ø 120	0	M6	3	290	Ø 165	143	40	6	15.5	M6	16	22	22
90S	140	100	56	90	10X13	172	240	Ø 115	Ø 95	Ø 140	0	M8	3	335	Ø 185	150	50	8	20	M8	20	25	25
90L	140	125	56	90	10X13	172	240	Ø 115	Ø 95	Ø 140	0	M8	3	365	Ø 185	150	50	8	20	M8	20	25	25
100L1	160	140	63	100	12X15	196	260	Ø 130	Ø 110	Ø 160	0	M8	3.5	398	Ø 205	160	60	8	24	M10	22	28	28
100L2	160	140	63	100	12X15	196	260	Ø 130	Ø 110	Ø 160	0	M8	3.5	398	Ø 205	160	60	8	24	M10	22	28	28
112M	190	140	70	112	12X15	222	295	Ø 130	Ø 110	Ø 160	0	M8	3.5	416	Ø 230	183	60	8	24	M10	22	28	28

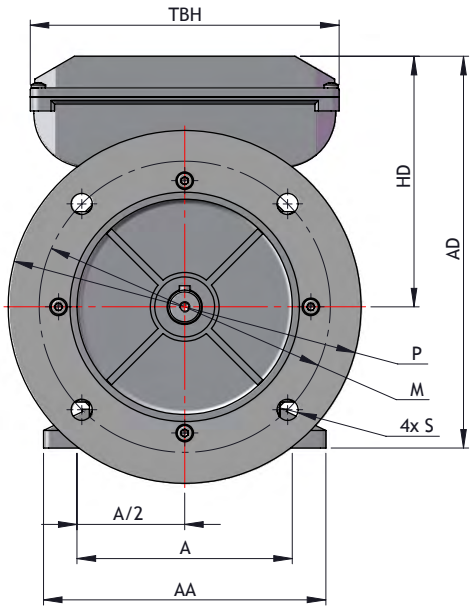
B35 - Large Flange & Feet Mounted Dimensions

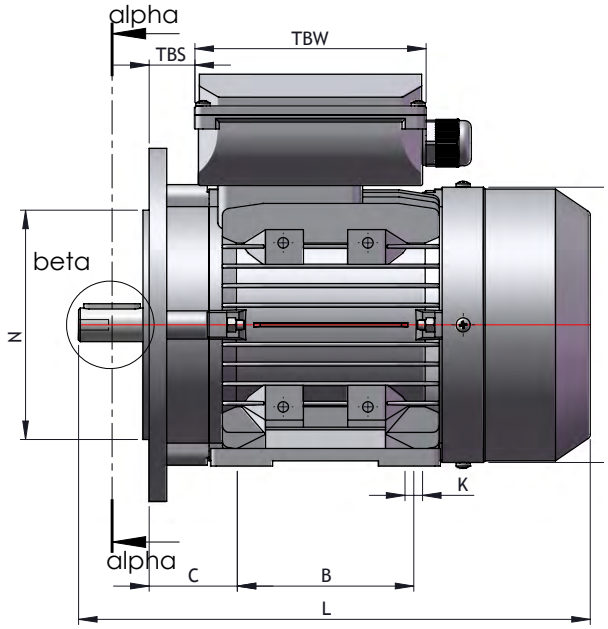


SECTION alpha-alpha
SCALE 1 : 1



DETAIL beta
SCALE 2 : 3



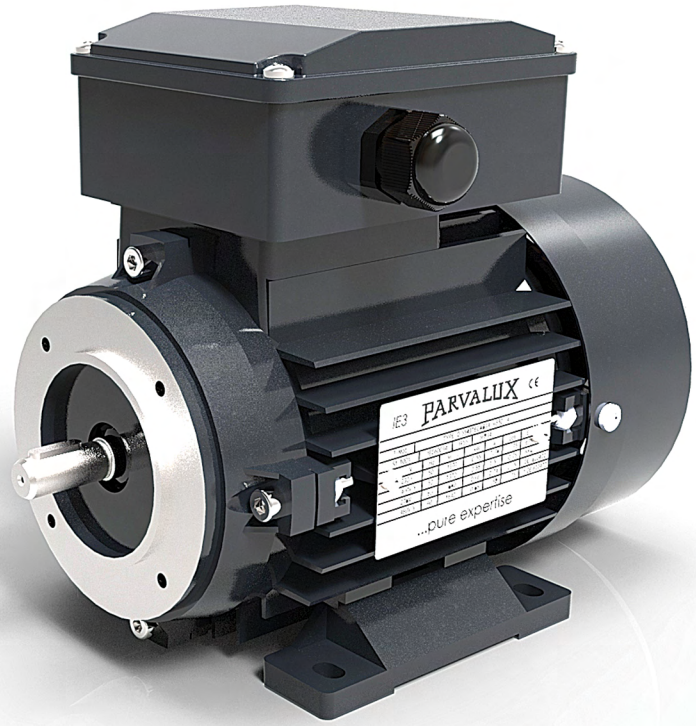


Frame Size	B35												Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
63	100	80	40	63	7X10	120	179	Ø 115	Ø 95	Ø 140	Ø 10	3	212	Ø 130	116	11	23	4	8.5	M4	10	15
71	112	90	45	71	7X10	132	194	Ø 130	Ø 110	Ø 160	Ø 10	3.5	255	Ø 145	123	14	30	5	11	M5	12	18
80	125	100	50	80	10X13	157	223	Ø 165	Ø 130	Ø 200	Ø 12	3.5	290	Ø 165	143	19	40	6	15.5	M6	16	22
90S	140	100	56	90	10X13	172	240	Ø 165	Ø 130	Ø 200	Ø 12	3.5	335	Ø 185	150	24	50	8	20	M8	20	25
90L	140	125	56	90	10X13	172	240	Ø 165	Ø 130	Ø 200	Ø 12	3.5	365	Ø 185	150	24	50	8	20	M8	20	25
100L1	160	140	63	100	12X15	196	260	Ø 215	Ø 180	Ø 250	Ø 15	4	398	Ø 205	160	28	60	8	24	M10	22	28
100L2	160	140	63	100	12X15	196	260	Ø 215	Ø 180	Ø 250	Ø 15	4	416	Ø 205	160	28	60	8	24	M10	22	28
112M	190	140	70	112	12X15	222	295	Ø 215	Ø 180	Ø 250	Ø 15	4	416	Ø 230	183	28	60	8	24	M10	22	28

A1PC SERIES

KEY FEATURES:

- SINGLE PHASED PERMANENT CAPACITOR MOTORS
- IN IEC STANDARD FRAMES
- ALUMINIUM HOUSINGS
- ASYNCHRONOUS SINGLE SPEED
- EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS
- SUITABLE FOR MOST FAN LOW STARTING TORQUE APPLICATIONS WHERE STARTING TORQUE REQUIREMENTS ARE 0.5-0.9 TIMES FULL LOAD TORQUE
- AVAILABLE IN FRAME SIZES 56-100



SINGLE PHASE AC MOTORS IN IEC FRAMES 0.09-3 KW

RANGE OVERVIEW

POWER RANGE:	0.09-3KW
PHASE:	SINGLE PHASE, PERMANENT CAPACITOR
EFFICIENCY RATING:	NO LEGISLATION FOR PRODUCT RANGE
FRAME SIZES:	56-100
POLES:	2/4/6
VOLTAGES:	230V 50HZ - 110V AVAILABLE ON REQUEST
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION CLASS:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

A1PC Series

2 Pole - 2800 rpm

IEC Single Phase Permanent Capacitor Asynchronous Motors

MODEL	FRAME	Power (KW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (Cos□)	T st/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μF/V)	Noise dB(A)	W.T (Kg)
A1PC-1-2-	56-1	0.09	0.8	2740	54	0.91	0.69	1.8	2.5	4μF/450V	67	2.8
A1PC-1-2-	56-2	0.12	0.9	2760	60	0.93	0.69	1.8	3.5	6μF/450V	67	3.05
A1PC-1-2-	56-3	0.18	1.4	2760	62	0.93	0.55	1.8	4.5	8μF/450V	70	3.5
A1PC-1-2-	63-1	0.18	1.4	2760	62	0.93	0.55	1.8	4.5	8μF/450V	70	4.1
A1PC-1-2-	63-2	0.25	1.7	2780	66	0.93	0.55	1.8	6	10μF/450V	70	4.5
A1PC-1-2-	63-3	0.37	2.5	2780	67	0.93	0.45	1.65	8	12μF/450V	75	5.25
A1PC-1-2-	71-1	0.37	2.6	2640	66	0.94	0.72	1.65	8	14μF/450V	75	6.1
A1PC-1-2-	71-2	0.55	3.6	2760	71	0.95	0.7	1.8	14	20μF/450V	75	7.7
A1PC-1-2-	80-1	0.75	4.5	2735	73	0.98	0.68	1.75	16	25μF/450V	75	10.3
A1PC-1-2-	80-2	1.1	6.6	2720	74	0.98	0.65	1.8	23	35μF/450V	78	11.6
A1PC-1-2-	80-3	1.5	9.2	2730	74	0.98	0.65	1.8	31	50μF/450V	78	13.6
A1PC-1-2-	90-S	1.5	8.5	2755	76	0.98	0.65	1.8	31	50μF/450V	80	14.6
A1PC-1-2-	90-L	2.2	12.3	2765	77	0.98	0.65	1.8	51	70μF/450V	80	17.8
A1PC-1-2-	100-L	3	16.9	2765	77	0.99	0.55	1.75	64	90μF/450V	83	23.7

4 Pole - 1400 rpm

IEC Single Phased Permanent Capacitor Asynchronous Motors

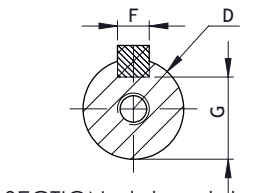
MODEL	FRAME	Power (KW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (Cos□)	T st/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μF/V)	Noise dB(A)	W.T (Kg)
A1PC-1-4-	56-1	0.06	0.6	1360	50	0.94	0.75	1.75	2	4μF/450V	63	3.3
A1PC-1-4-	56-2	0.09	0.8	1360	52	0.94	0.6	1.75	3	6μF/451V	63	3.6
A1PC-1-4-	56-3	0.12	1.3	1370	52	0.92	0.6	1.75	3	8μF/452V	65	4.1
A1PC-1-4-	63-1	0.12	1.3	1370	52	0.92	0.6	1.75	3	8μF/453V	65	4.45
A1PC-1-4-	63-2	0.18	1.5	1370	54	0.94	0.6	1.6	4	10μF/450V	65	5.05
A1PC-1-4-	63-3	0.25	2	1370	58	0.95	0.6	1.6	5	12μF/450V	65	5.4
A1PC-1-4-	71-1	0.25	2	1320	56	0.94	0.75	1.6	5	14μF/450V	65	6.2
A1PC-1-4-	71-2	0.37	2.9	1325	58	0.94	0.7	1.55	7	20μF/450V	68	7.3
A1PC-1-4-	80-1	0.55	3.9	1340	64	0.94	0.7	1.7	11	25μF/450V	73	10.1
A1PC-1-4-	80-2	0.75	5.3	1340	64	0.94	0.7	1.75	15	35μF/450V	73	11.4
A1PC-1-4-	90-S	1.1	7	1355	72	0.95	0.68	1.8	22	50μF/450V	75	14.4
A1PC-1-4-	90-L	1.5	9.3	1360	74	0.95	0.68	1.8	32	50μF/450V	78	17.5
A1PC-1-4-	100-L1	2.2	12.6	1390	78	0.97	0.48	1.75	49	70μF/450V	80	24.5
A1PC-1-4-	100-L2	3	16.5	1380	79	0.99	0.45	1.6	61	90μF/450V	80	32

6 Pole - 900 rpm

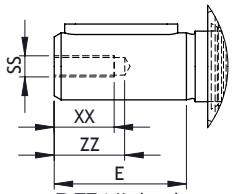
IEC Single Phase Permanent Capacitor Asynchronous Motors

MODEL	FRAME	Power (KW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (Cos□)	T st/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μF/V)	Noise dB(A)	W.T (Kg)
A1PC-1-6-	63-1	0.09	0.92	900	46	0.92	0.8	1.45	2	8μF/464V	63	5.1
A1PC-1-6-	63-2	0.12	1.05	900	54	0.92	0.75	1.45	3	11μF/465V	63	6
A1PC-1-6-	71-1	0.18	1.55	900	55	0.92	0.7	1.5	4	16μF/466V	68	6.3
A1PC-1-6-	71-2	0.25	2.07	900	57	0.92	0.68	1.5	5	20μF/467V	68	7.6
A1PC-1-6-	80-1	0.37	2.82	900	62	0.92	0.68	1.6	8	25μF/468V	68	9
A1PC-1-6-	80-2	0.55	4.08	900	63	0.93	0.68	1.6	14	30μF/469V	70	11.6
A1PC-1-6-	90-S	0.75	5.2	900	66	0.95	0.65	1.6	16	40μF/470V	70	13.5
A1PC-1-6-	90-L	1.1	7.51	900	67	0.95	0.62	1.6	25	50μF/471V	70	16.2

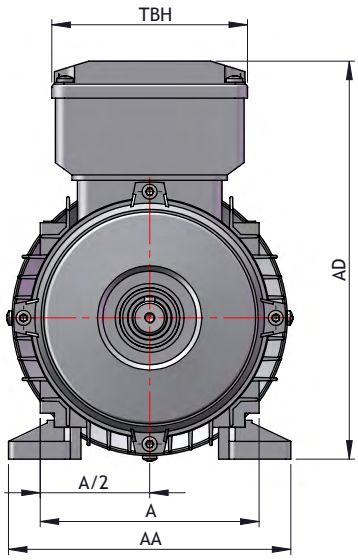
B3 - Foot Mounted Dimensions

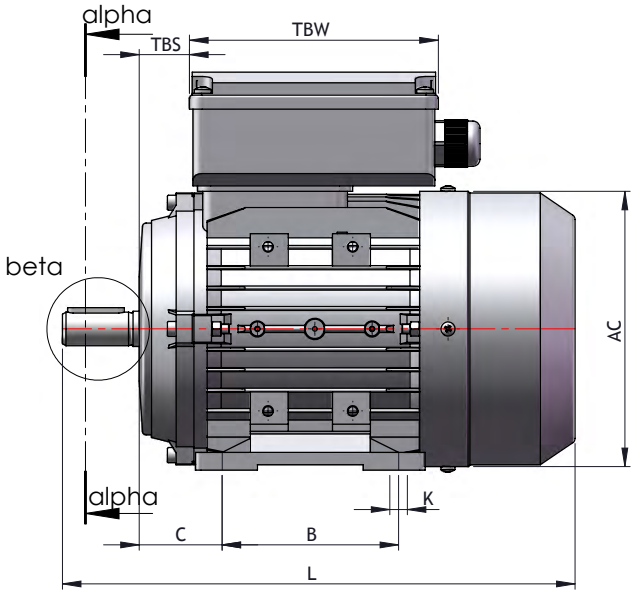


SECTION alpha-alpha
SCALE 1 : 1



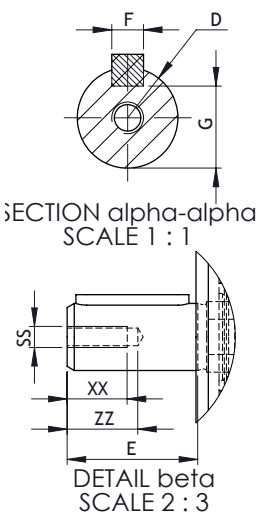
DETAIL beta
SCALE 2 : 3

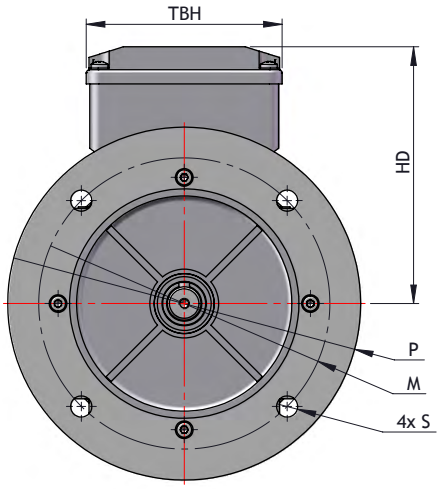


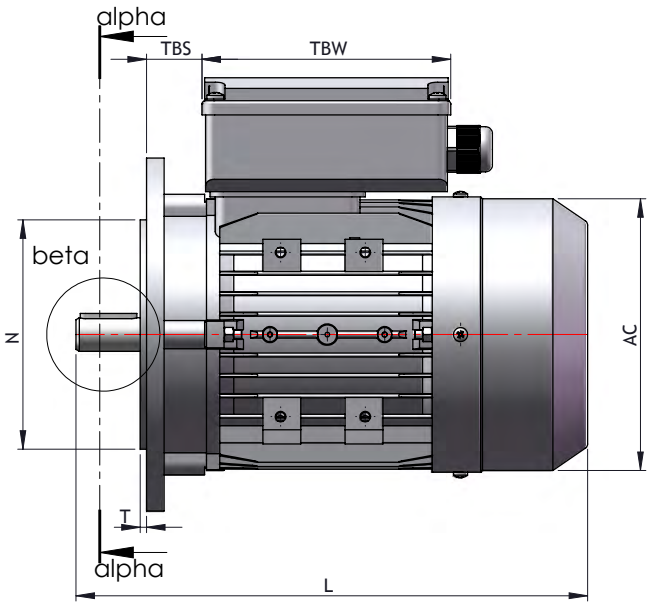


Frame Size	B3							Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	L	AC	HD	D	E	F	G	SS	XX	ZZ
56	90	71	36	56	5.8x8.8	110	144	196	Ø117	88	Ø9	20	3	7.2	M3	9	12
63	100	80	40	63	7x10	120	181	220	Ø130	118	Ø11	23	4	8.5	M4	10	14
71	112	90	45	71	7x10	132	196	241	Ø147	125	Ø14	30	5	11	M5	12	17
71	112	90	45	71	7x10	132	196	255	Ø147	125	Ø14	30	5	11	M5	12	17
80	125	100	50	80	10x13	160	226	290	Ø163	146	Ø19	40	6	15.5	M6	16	21
90S	140	100	56	90	10x13	175	243	312	Ø183	153	Ø24	50	8	20	M8	19	25
90L	140	125	56	90	10x13	175	243	367	Ø183	153	Ø24	50	8	20	M8	19	25
100L1	160	140	63	100	12x15	198	265	369	Ø205	165	Ø28	60	8	24	M10	22	30
100L2	160	140	63	100	12x15	198	265	387	Ø205	165	Ø28	60	8	24	M10	22	30

B5 - Large Flange Mounted Dimensions

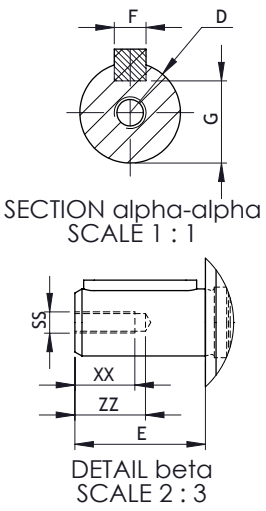


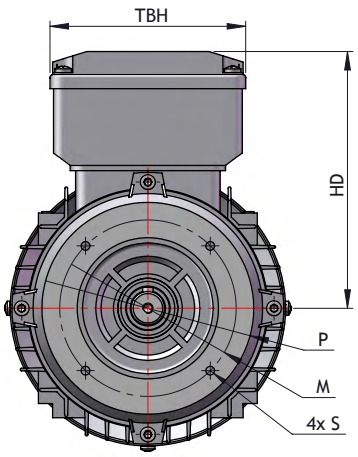


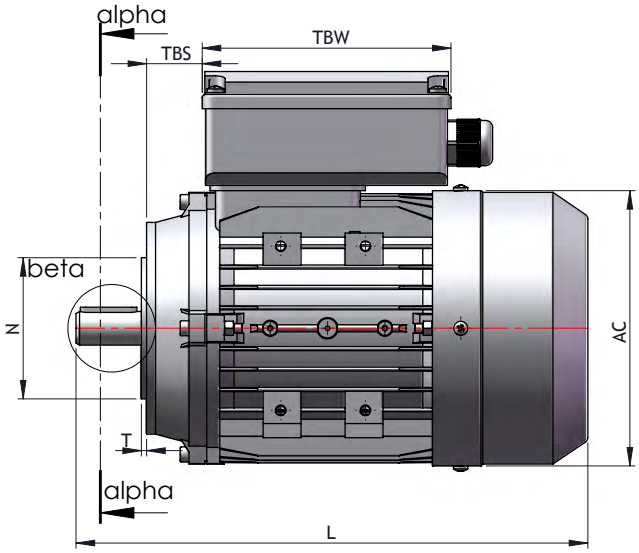


Frame Size	B5					Overall Dimensions			Shaft						
	M	N	P	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
56	Ø100	Ø80	Ø120	Ø7	3	196	Ø117	88	Ø9	20	3	7.2	M3	9	12
63	Ø115	Ø95	Ø140	Ø10	3	220	Ø130	118	Ø11	23	4	8.5	M4	10	14
71	Ø130	Ø110	Ø160	Ø10	3.5	241	Ø147	125	Ø14	30	5	11	M5	12	17
71	Ø130	Ø110	Ø160	Ø10	3.5	255	Ø147	125	Ø14	30	5	11	M5	12	17
80	Ø130	Ø130	Ø200	Ø12	3.5	290	Ø163	146	Ø19	40	6	15.5	M6	16	21
90S	Ø165	Ø130	Ø200	Ø12	3.5	312	Ø183	153	Ø24	50	8	20	M8	19	25
90L	Ø165	Ø130	Ø200	Ø12	3.5	367	Ø183	153	Ø24	50	8	20	M8	19	25
100L1	Ø215	Ø180	Ø250	Ø15	4	369	Ø205	165	Ø28	60	8	24	M10	22	30
100L2	Ø215	Ø180	Ø250	Ø15	4	387	Ø205	165	Ø28	60	8	24	M10	22	30

B14 - Face Mounted Dimensions

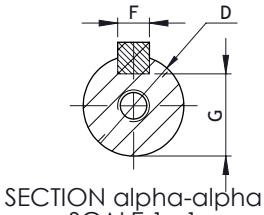




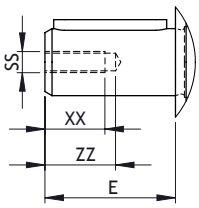


Frame Size	B14					Overall Dimensions			Shaft						
	M	N	P	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
56	Ø65	Ø50	Ø80	M5	2.5	196	Ø117	88	Ø9	20	3	7.2	M3	9	12
63	Ø75	Ø60	Ø90	M5	2.5	220	Ø130	118	Ø11	23	4	8.5	M4	10	14
71	Ø85	Ø70	Ø105	M6	2.5	241	Ø147	125	Ø14	30	5	11	M5	12	17
71	Ø85	Ø70	Ø105	M6	2.5	255	Ø147	125	Ø14	30	5	11	M5	12	17
80	Ø100	Ø80	Ø120	M6	3	290	Ø163	146	Ø19	40	6	15.5	M6	16	21
90S	Ø115	Ø95	Ø140	M8	3	312	Ø183	153	Ø24	50	8	20	M8	19	25
90L	Ø115	Ø95	Ø140	M8	3	367	Ø183	153	Ø24	50	8	20	M8	19	25
100L1	Ø130	Ø110	Ø160	M8	3.5	369	Ø205	165	Ø28	60	8	24	M10	22	30
100L2	Ø130	Ø110	Ø160	M8	3.5	387	Ø205	165	Ø28	60	8	24	M10	22	30

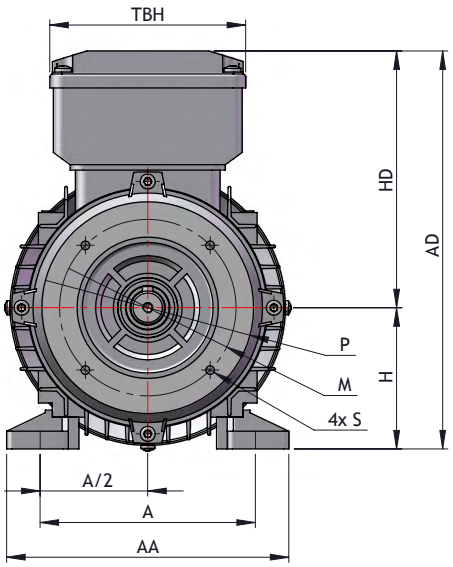
B34 - Face & Feet Mounted Dimensions

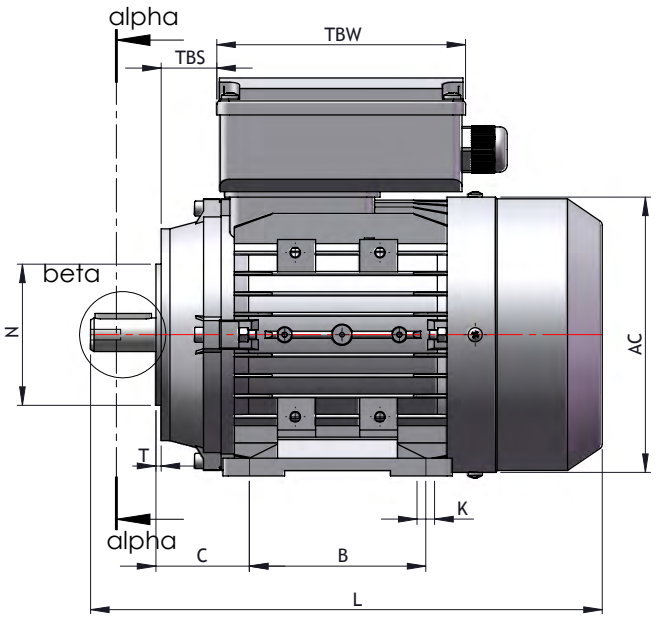


SECTION alpha-alpha
SCALE 1 : 1



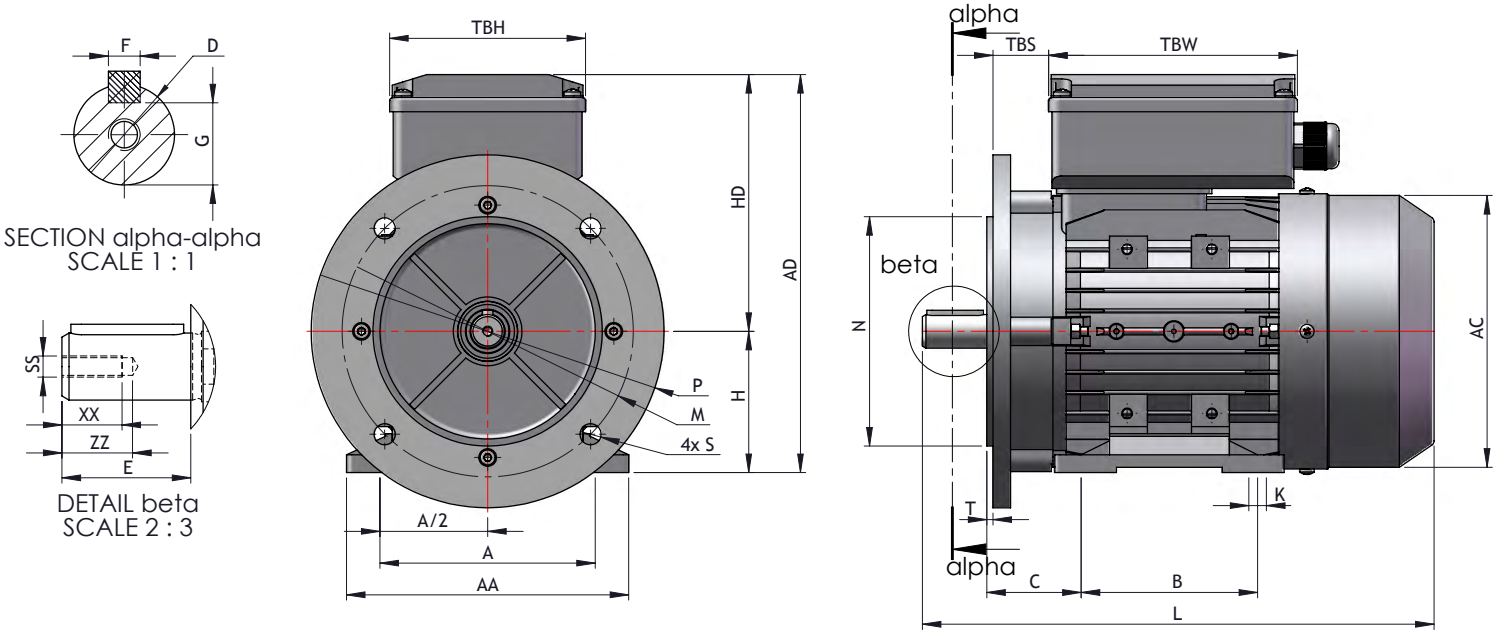
DETAIL beta
SCALE 2 : 3





Frame Size	B34												Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
56	90	71	36	56	5.8x8.8	110	144	Ø65	Ø50	Ø80	M5	2.5	196	Ø117	88	Ø9	20	3	7.2	M3	9	12
63	100	80	40	63	7x10	120	181	Ø75	Ø60	Ø90	M5	2.5	220	Ø130	118	Ø11	23	4	8.5	M4	10	14
71	112	90	45	71	7x10	132	196	Ø85	Ø70	Ø105	M6	2.5	241	Ø147	125	Ø14	30	5	11	M5	12	17
71	112	90	45	71	7x10	132	196	Ø85	Ø70	Ø105	M6	2.5	255	Ø147	125	Ø14	30	5	11	M5	12	17
80	125	100	50	80	10x13	160	226	Ø100	Ø80	Ø120	M6	3	290	Ø163	146	Ø19	40	6	15.5	M6	16	21
90S	140	100	56	90	10x13	175	243	Ø115	Ø95	Ø140	M8	3	312	Ø183	153	Ø24	50	8	20	M8	19	25
90L	140	125	56	90	10x13	175	243	Ø115	Ø95	Ø140	M8	3	367	Ø183	153	Ø24	50	8	20	M8	19	25
100L1	160	140	63	100	12x15	198	265	Ø130	Ø110	Ø160	M8	3.5	369	Ø205	165	Ø28	60	8	24	M10	22	30
100L2	160	140	63	100	12x15	198	265	Ø130	Ø110	Ø160	M8	3.5	387	Ø205	165	Ø28	60	8	24	M10	22	30

B35 - Large Flange & Feet Mounted Dimensions

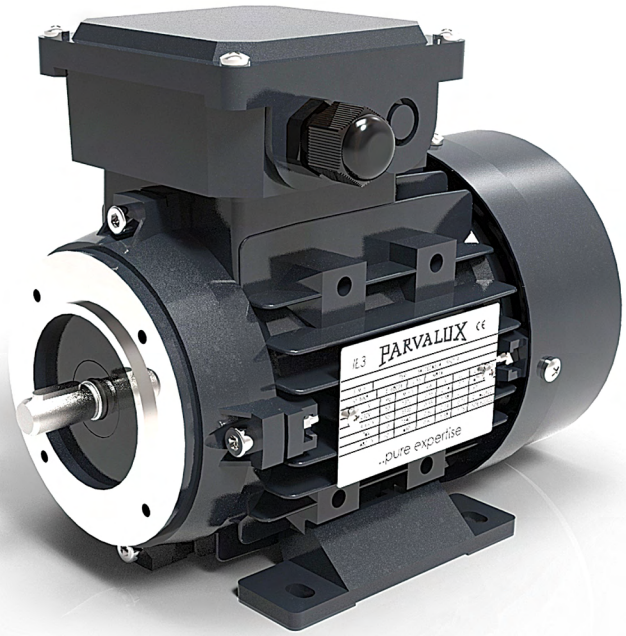


Frame Size	B35												Overall Dimensions			Shaft						
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	D	E	F	G	SS	XX	ZZ
56	90	71	36	56	5.8x8.8	110	144	Ø100	Ø80	Ø120	Ø7	3	196	Ø117	88	Ø9	20	3	7.2	M3	9	12
63	100	80	40	63	7x10	120	181	Ø115	Ø95	Ø140	Ø10	3	220	Ø130	118	Ø11	23	4	8.5	M4	10	14
71	112	90	45	71	7x10	132	196	Ø130	Ø110	Ø160	Ø10	3.5	241	Ø147	125	Ø14	30	5	11	M5	12	17
71	112	90	45	71	7x10	132	196	Ø130	Ø110	Ø160	Ø10	3.5	255	Ø147	125	Ø14	30	5	11	M5	12	17
80	125	100	50	80	10x13	160	226	Ø130	Ø130	Ø200	Ø12	3.5	290	Ø163	146	Ø19	40	6	15.5	M6	16	21
90S	140	100	56	90	10x13	175	243	Ø165	Ø130	Ø200	Ø12	3.5	312	Ø183	153	Ø24	50	8	20	M8	19	25
90L	140	125	56	90	10x13	175	243	Ø165	Ø130	Ø200	Ø12	3.5	367	Ø183	153	Ø24	50	8	20	M8	19	25
100L1	160	140	63	100	12x15	198	265	Ø215	Ø180	Ø250	Ø15	4	369	Ø205	165	Ø28	60	8	24	M10	22	30
100L2	160	140	63	100	12x15	198	265	Ø215	Ø180	Ø250	Ø15	4	387	Ø205	165	Ø28	60	8	24	M10	22	30

A3 SERIES

KEY FEATURES:

- THREE PHASED AC MOTORS
- IN IEC STANDARD FRAMES
- ALUMINIUM HOUSINGS
- AVAILABLE IN IE1 AND IE2
- EASILY INTERCHANGEABLE WITH OTHER BRANDED MOTORS
- LIGHTWEIGHT, HIGH PERFORMANCE AND LOW NOISE LEVELS
- MULTI-MOUNT DESIGN GIVES END USERS GREATER FLEXIBILITY
- THERMISTORS AS STANDARD
- DRAIN HOLES DE & NDE



THREE PHASE AC MOTORS IN IEC FRAMES 0.09-37 KW

RANGE OVERVIEW

POWER RANGE:	0.09-37KW
PHASE:	THREE PHASE
EFFICIENCY RATING:	IE1 - STANDARD EFFICIENCY & IE2 - HIGH EFFICIENCY
FRAME SIZES:	56-200
POLES:	2/4/6/8
VOLTAGES:	UP TO 3KW: 230/400V 3KW+:400/690V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION:	CLASS F, CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

IE1 2 Pole - 2800 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	CURRENT (A)			CURRENT (A)			CURRENT (A)			RPM.	EFF. (%)	Power Factor (CosØ)	Cs/ Cn	Cmax /Cn	Cn (Nm)	Is/In	dB(A)	Weight (Kg)
			220V	380V	660V	230V	400V	690V	240V	415V	720V	(r/min)								
A3-1-2-	56-1	0.09	0.66	0.38	0.22	0.62	0.36	0.21	0.6	0.35	0.2	2710	53	0.72	2.2	2.3	0,502	4	58	2.6
A3-1-2-	56-2	0.12	0.73	0.42	0.24	0.69	0.4	0.23	0.67	0.39	0.22	2700	61	0.72	2.2	2.3	0,534	4	58	3
A3-1-2-	56-3	0.18	1.00	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	2710	63	0.75	2.2	2.4	0,642	6	61	4
A3-1-2-	63-1	0.18	1.00	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	2710	63	0.75	2.2	2.4	0,641	6	61	4
A3-1-2-	63-2	0.25	1.29	0.75	0.43	1.23	0.71	0.41	1.19	0.69	0.4	2710	65	0.78	2.2	2.4	0,884	6	61	4.2
A3-1-2-	63-3	0.37	1.92	1.11	0.64	1.82	1.05	0.61	1.76	1.02	0.59	2710	65	0.78	2.2	2.4	1,261	6	62	4.7
A3-1-2-	71-1	0.37	1.76	1.02	0.59	1.67	0.97	0.56	1.61	0.93	0.54	2730	70	0.79	2.2	2.4	1,262	6	64	5.2
A3-1-2-	71-2	0.55	2.57	1.49	0.86	2.45	1.42	0.82	2.36	1.36	0.79	2760	71	0.79	2.2	2.4	1,869	6	64	6
A3-1-2-	71-3	0.75	3.33	1.93	1.11	3.18	1.83	1.06	3.06	1.77	1.02	2730	72	0.82	2.2	2.4	2,54	6	65	7
A3-1-2-	80-1	0.75	3.21	1.86	1.07	3.06	1.77	1.02	2.94	1.7	0.98	2770	73	0.84	2.2	2.4	2,54	6	67	8.7

IE1 4 Pole - 1400 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	CURRENT (A)			CURRENT (A)			CURRENT (A)			RPM.	EFF. (%)	Power Factor (CosØ)	Cs/ Cn	Cmax /Cn	Cn (Nm)	Is/In	dB(A)	Weight (Kg)
			220V	380V	660V	230V	400V	690V	240V	415V	720V	(r/min)								
A3-1-4-	56-1	0.06	0.64	0.37	0.21	0.61	0.35	0.2	0.58	0.34	0.19	1360	50	0.56	2.3	2.4	0,478	4	50	2.9
A3-1-4-	56-2	0.09	0.82	0.47	0.27	0.78	0.45	0.26	0.75	0.43	0.25	1360	52	0.59	2.3	2.4	0,478	4	50	3.2
A3-1-4-	63-1	0.12	1	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	1360	52	0.64	2.2	2.4	0,93	4	52	3.7
A3-1-4-	63-2	0.18	1.28	0.74	0.43	1.21	0.7	0.4	1.17	0.67	0.39	1310	57	0.65	2.2	2.4	1,28	4	52	4.2
A3-1-4-	63-3	0.25	1.66	0.96	0.55	1.58	0.91	0.53	1.52	0.88	0.51	1340	60	0.66	2.2	2.2	1,77	4	54	5
A3-1-4-	71-1	0.25	1.52	0.88	0.51	1.45	0.84	0.48	1.39	0.81	0.46	1350	60	0.72	2.2	2.4	1,78	6	55	5
A3-1-4-	71-2	0.37	2.02	1.17	0.67	1.92	1.11	0.64	1.85	1.07	0.62	1370	65	0.74	2.2	2.4	2,62	6	55	5.8
A3-1-4-	71-3	0.55	2.92	1.69	0.97	2.78	1.6	0.93	2.67	1.55	0.89	1380	66	0.75	2.2	2.4	3,86	6	57	6.5
A3-1-4-	80-1	0.55	2.87	1.66	0.96	2.74	1.58	0.91	2.63	1.52	0.88	1370	67	0.75	2.2	2.4	3,87	6	58	8.1
A3-1-4-	80-2	0.75	3.5	2.03	1.17	3.34	2.33	1.11	3.21	1.86	1.07	1380	72	0.78	2.2	2.4	5,27	6	58	9.1

IE1 6 Pole - 900 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	CURRENT (A)			CURRENT (A)			CURRENT (A)			RPM.	EFF. (%)	Power Factor (CosØ)	Cs/ Cn	Cmax /Cn	Cn (Nm)	Is/In	dB(A)	Weight (Kg)
			220V	380V	660V	230V	400V	690V	240V	415V	720V	(r/min)								
A3-1-6-	63-1	0.09	0.92	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	840	42	0.61	2	2	0,98	3.5	50	4.2
A3-1-6-	63-2	0.12	1.13	0.65	0.38	1.08	0.62	0.36	1.03	0.6	0.34	850	45	0.62	2	2	1,18	3.5	50	4.5
A3-1-6-	71-1	0.18	1.28	0.74	0.43	1.22	0.7	0.41	1.17	0.68	0.39	880	56	0.66	1.6	1.7	1,93	4	52	5.6
A3-1-6-	71-2	0.25	1.59	0.92	0.53	1.51	0.87	0.5	1.46	0.84	0.49	900	59	0.7	2.1	2.2	2,36	4	52	6
A3-1-6-	71-3	0.37	2.31	1.34	0.77	2.2	1.27	0.73	2.11	1.22	0.7	890	61	0.69	2	2.1	3,93	4	54	6.8
A3-1-6-	80-1	0.37	2.24	1.3	0.75	2.13	1.23	0.71	2.05	1.19	0.68	900	62	0.7	1.9	1.9	3,90	4	56	8.1
A3-1-6-	80-2	0.55	2.99	1.73	1	2.85	1.65	0.95	2.74	1.59	0.91	900	67	0.72	2	2.3	5,84	4	56	9.6
A3-1-6-	80-3	0.75	4.02	2.33	1.34	3.83	2.21	1.28	3.69	2.13	1.23	900	68	0.72	2	2.3	7,88	4	58	10
A3-1-6-	90-S	0.75	3.96	2.29	1.32	3.77	2.18	1.26	3.63	2.1	1.21	920	69	0.72	2.2	2.2	7,83	5.5	59	11.3

IE1 8 Pole - 700 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	CURRENT (A)			CURRENT (A)			CURRENT (A)			RPM.	EFF. (%)	Power Factor (CosØ)	Cs/ Cn	Cmax /Cn	Cn (Nm)	Is/In	dB(A)	Weight (Kg)
			220V	380V	660V	230V	400V	690V	240V	415V	720V	(r/min)								
A3-1-8-	71-1	0.09	0.88	0.51	0.29	0.84	0.48	0.28	0.81	0.47	0.27	680	48	0.56	1.5	1.7	1,05	3	50	5.6
A3-1-8-	71-2	0.12	1.05	0.61	0.35	1	0.58	0.33	0.96	0.55	0.32	690	51	0.59	1.6	1.7	1,63	2.7	50	6
A3-1-8-	80-1	0.18	1.52	0.88	0.51	1.45	0.84	0.48	1.39	0.8	0.46	680	51	0.61	1.5	1.7	2,60	2.8	52	9.4
A3-1-8-	80-2	0.25	1.92	1.11	0.64	1.83	1.06	0.61	1.76	1.02	0.59	680	56	0.61	1.6	2	3,60	2.7	52	10.1
A3-1-8-	90-S	0.37	2.45	1.42	0.82	2.33	1.35	0.78	2.24	1.3	0.75	680	63	0.63	1.6	1.8	5,22	2.8	56	12.5
A3-1-8-	90-L	0.55	3.36	1.95	1.12	3.21	1.85	1.07	3.08	1.78	1.03	680	66	0.65	1.6	1.8	7,63	3	56	15.3
A3-1-8-	100-L1	0.75	4.45	2.58	1.48	4.24	2.45	1.41	4.08	2.36	1.36	710	66	0.67	1.7	2.1	10,42	3.5	59	17.2

IE2 2 Pole - 2800 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	EFF.(%)	Current In (A) 400V	Power Factor (CosØ)	RPM (RPM/MIN)	Cn (Nm)	Cs/Cn	Is/In
A3-2-2-	80-1	0.75	77.4	1.75	0.8	2840	2,49	2.9	5.8
A3-2-2-	80-2	1.1	80	2.42	0.82	2850	3,53	3.5	6.8
A3-2-2-	90-S	1.5	81.4	3.2	0.83	2850	5,09	3.5	6.9
A3-2-2-	90-L	2.2	83.2	4.54	0.84	2860	7,32	4.1	7.9
A3-2-2-	100-L	3	84.6	5.88	0.87	2880	9,96	3.4	7.8
A3-2-2-	112-M	4	86	7.54	0.89	2890	13,16	2.7	7.5
A3-2-2-	132-S1	5.5	87.2	10.2	0.89	2900	18,25	2.4	7.7
A3-2-2-	132-S2	7.5	88.1	13.8	0.89	2910	24,47	2.6	8.4
A3-2-2-	160-M1	11	89.4	19.9	0.89	2930	20,23	2.4	7.6
A3-2-2-	160-M2	15	90.3	26.9	0.89	2930	27,68	2.6	8
A3-2-2-	160-L	18.5	90.9	32.6	0.9	2940	33,42	3	9
A3-2-2-	180-M	22	91.3	38.6	0.9	2950	39,11	2.6	8.5
A3-2-2-	200-L1	30	92	52.3	0.9	2950	51,93	2.4	8
A3-2-2-	200-L2	37	92.5	64.1	0.9	2950	63,48	2.5	8.5

IE2 4 Pole - 1400 rpm

IEC Three Phase Aluminium Motors

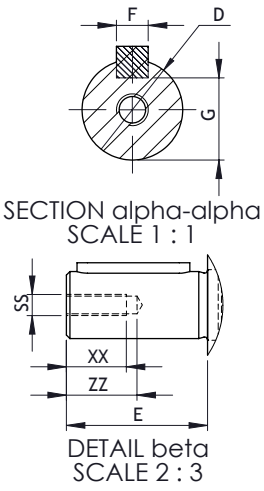
MODEL	FRAME	Power (KW)	EFF.(%)	Current In (A) 400V	Power Factor (CosØ)	RPM (RPM/MIN)	Cn (Nm)	Cs/Cn	Is/In
A3-2-4-	80-2	0.75	79.6	1.79	0.76	1410	5,27	2.8	5.3
A3-2-4-	90-S	1.1	81.4	2.5	0.78	1420	7,61	3.8	6.7
A3-2-4-	90-L	1.5	82.8	3.31	0.79	1420	10,39	4	7.2
A3-2-4-	100-L1	2.2	84.3	4.83	0.78	1440	14,76	3.6	7.4
A3-2-4-	100-L2	3	85.5	6.33	0.8	1440	20,13	3.8	7.8
A3-2-4-	112-M	4	86.6	8.23	0.81	1440	26,89	3.1	7.1
A3-2-4-	132-S	5.5	87.9	10.9	0.83	1450	36,25	2.6	7.4
A3-2-4-	132-M	7.5	88.7	14.5	0.84	1450	49,21	2.8	7.7
A3-2-4-	160-M	11	89.8	21.6	0.82	1450	71,86	2.7	7.7
A3-2-4-	160-L	15	90.6	28.4	0.84	1450	97,90	2.4	7.3
A3-2-4-	180-M	18.5	91.4	34.4	0.85	1460	121,32	2.2	7.4
A3-2-4-	180-L	22	91.7	40.3	0.86	1460	143,26	2.3	7.5
A3-2-4-	200-L	30	92.3	55.2	0.86	1470	195,54	2.8	7.6

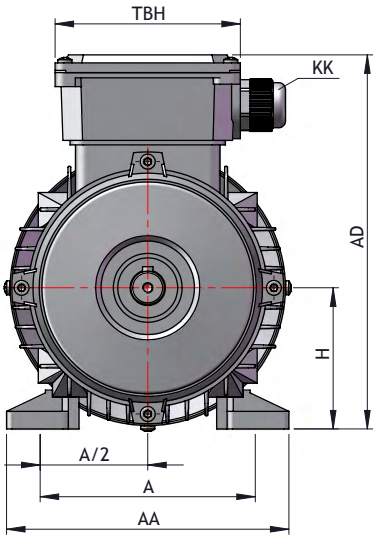
IE2 6 Pole - 900 rpm

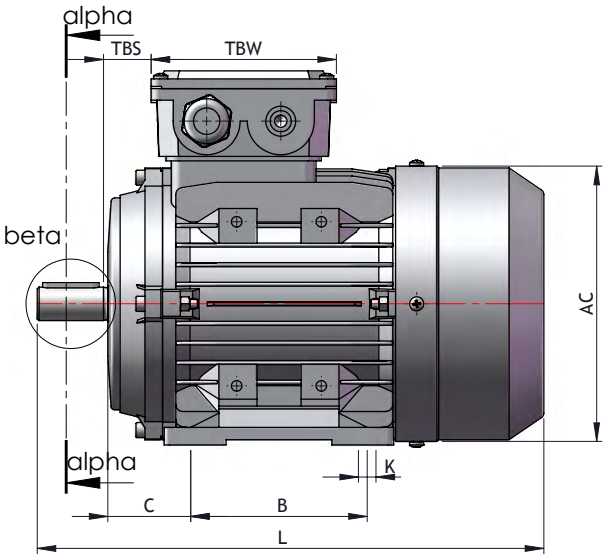
IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	EFF.(%)	Current In (A) 400V	Power Factor (CosØ)	RPM (RPM/MIN)	Cn (Nm)	Cs/Cn	Is/In
A3-2-6-	90-S	0.75	76	2.01	0.71	925	7,75	3.1	4.7
A3-2-6-	90-L	1.1	78.1	2.82	0.72	930	11,43	3.2	5
A3-2-6-	100-L	1.5	80	3.71	0.73	940	15,09	3.1	5.9
A3-2-6-	112-M	2.2	81.8	5.17	0.75	945	22,13	2.6	5.5
A3-2-6-	132-S	3	83.3	6.84	0.76	960	30,32	2.2	5.7
A3-2-6-	132-M1	4	84.6	8.86	0.77	960	41,25	2.4	6.2
A3-2-6-	132-M2	5.5	86	12	0.77	960	54,86	2.6	6.7
A3-2-6-	160-M	7.5	87.5	16.1	0.77	970	74,69	2	5.6
A3-2-6-	160-L	11	89	22.9	0.78	970	108,92	2	5.8
A3-2-6-	180-L	15	90.1	28.9	0.83	975	147,77	1.9	7.5
A3-2-6-	200-L1	18.5	90.4	35.6	0.83	975	180,32	2.2	6.3
A3-2-6-	200-L2	22	90.9	41.6	0.84	975	214,53	2.3	6.02

B3 - Foot Mounted Dimensions

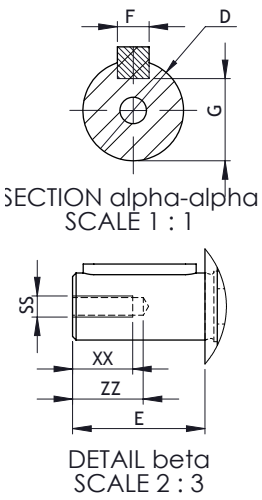


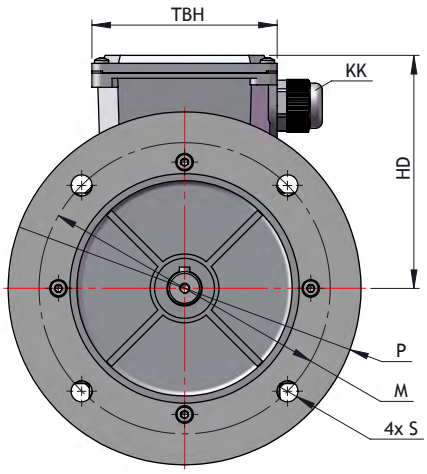


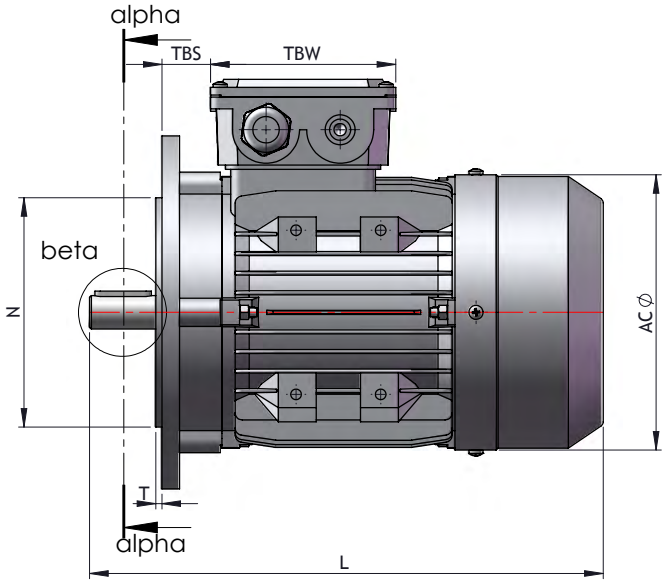


Frame Size	B3							Overall Dimensions							Shaft							
	A	B	C	H	K	AA	AD	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	90	71	36	56	5.8 x 8.8	110	156	196	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	100	80	40	63	7 x 10	120	171	220	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71-1	112	90	45	71	7 x 10	132	186	241	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	112	90	45	71	7 x 10	132	186	255	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	125	100	50	80	10 x 13	160	213	290	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	140	100	56	90	10 x 13	175	229	312	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	337	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	367	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	369	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	387	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	190	140	70	112	12 x 15	220	279	395	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	437	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	475	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	501	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
160-L	254	254	108	160	15 x 19	290	384	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
180-M	279	241	121	180	15 x 19	340	440	730	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
180-L	279	279	121	180	15 x 19	340	440	730	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
200-L	318	305	133	200	19 x 29	390	460	745	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	42	53	2

B5 - Large Flange Mounted Dimensions

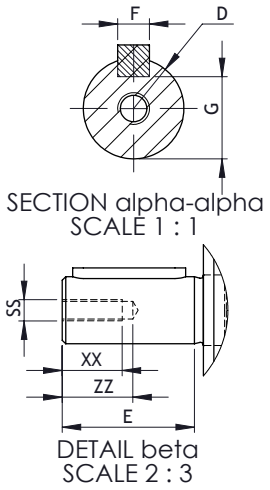


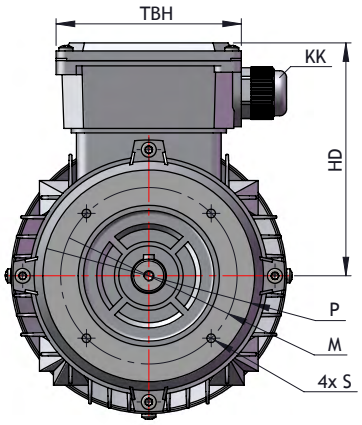


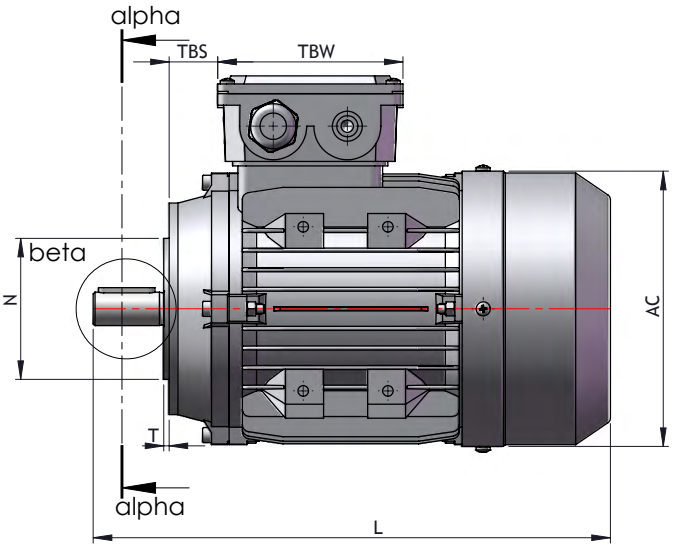


Frame Size	B5					Overall Dimensions							Shaft							
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	Ø100	Ø80	Ø120	Ø7	3	196	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	Ø115	Ø95	Ø140	Ø10	3	220	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	Ø130	Ø110	Ø160	Ø10	3.5	241	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	Ø130	Ø110	Ø160	Ø10	3.5	255	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	Ø165	Ø130	Ø200	Ø12	3.5	290	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	Ø165	Ø130	Ø200	Ø12	3.5	312	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	Ø165	Ø130	Ø200	Ø12	3.5	337	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	Ø165	Ø130	Ø200	Ø12	3.5	367	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	Ø215	Ø180	Ø250	Ø15	4	369	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	Ø215	Ø180	Ø250	Ø15	4	387	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	Ø215	Ø180	Ø250	Ø15	4	395	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	Ø265	Ø230	Ø300	Ø15	4	437	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	Ø265	Ø230	Ø300	Ø15	4	475	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	Ø265	Ø230	Ø300	Ø15	4	501	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M/L	Ø300	Ø250	Ø350	Ø19	5	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
180-M/L	Ø300	Ø250	Ø350	Ø19	5	730	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
200-L	Ø350	Ø300	Ø400	Ø19	5	745	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	42	53	2

B14 - Face Mounted Dimensions

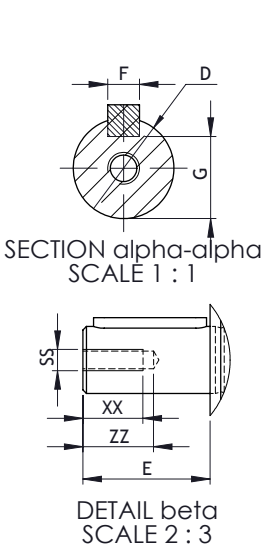


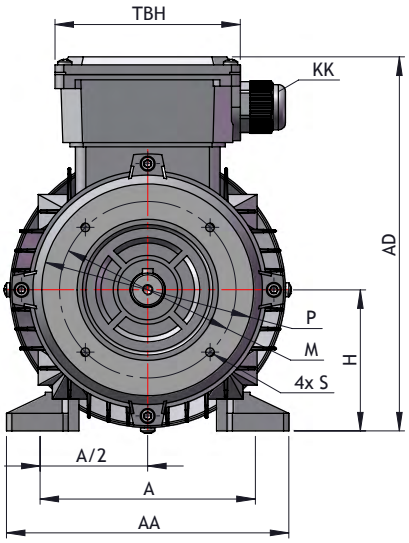


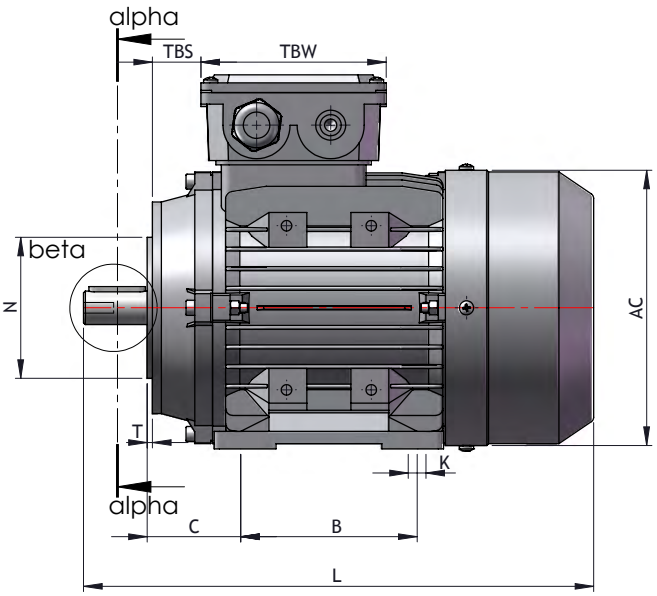


Frame Size	B14					Overall Dimensions							Shaft							
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	Ø65	Ø50	Ø80	M5	2.5	196	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	Ø75	Ø60	Ø90	M5	2.5	220	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	Ø85	Ø70	Ø105	M6	2.5	241	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	Ø85	Ø70	Ø105	M6	2.5	255	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	Ø110	Ø80	Ø120	M6	3	290	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	Ø115	Ø95	Ø140	M8	3	312	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	Ø115	Ø95	Ø140	M8	3	337	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	Ø115	Ø95	Ø140	M8	3	367	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	Ø130	Ø110	Ø160	M8	3.5	369	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	Ø130	Ø110	Ø160	M8	3.5	387	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	Ø130	Ø110	Ø160	M8	3.5	395	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	Ø165	Ø130	Ø200	M10	4	437	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	Ø165	Ø130	Ø200	M10	4	475	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	Ø165	Ø130	Ø200	M10	4	501	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	2
160-M/L	Ø215	Ø180	Ø250	M10	4	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2

B34 - Face & Feet Mounted Dimensions

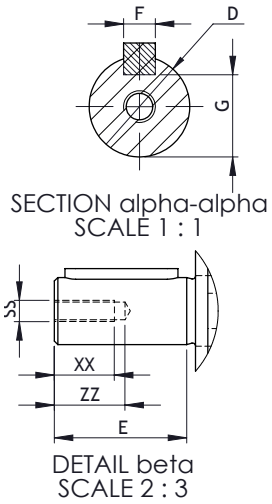


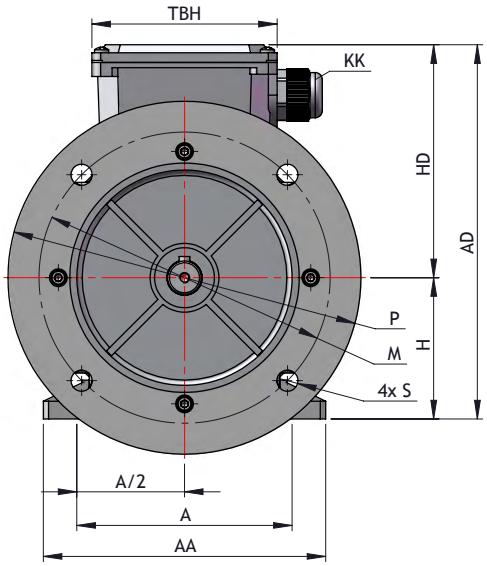


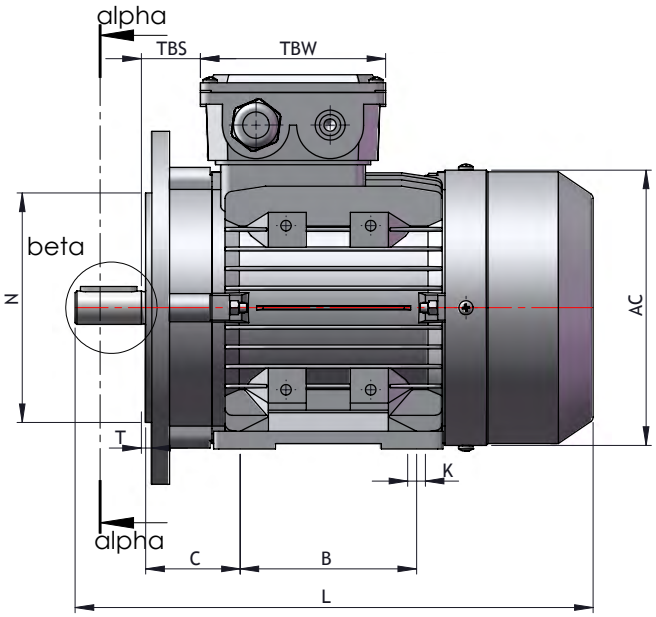


Frame Size	B34												Overall Dimensions							Shaft							
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	90	71	36	56	5.8x 8.8	110	156	Ø65	Ø50	Ø80	M5	2.5	196	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	100	80	40	63	7 x 10	120	171	Ø75	Ø60	Ø90	M5	2.5	220	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	112	90	45	71	7 x 10	132	186	Ø85	Ø70	Ø105	M6	2.5	241	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	112	90	45	71	7 x 10	132	186	Ø85	Ø70	Ø105	M6	2.5	255	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	125	100	50	80	10 x 13	160	213	Ø110	Ø80	Ø120	M6	3	290	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	140	100	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	312	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	337	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	367	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	Ø130	Ø110	Ø160	M8	3.5	369	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	Ø130	Ø110	Ø160	M8	3.5	387	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	190	140	70	112	12 x 15	220	279	Ø130	Ø110	Ø160	M8	3.5	395	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	437	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	475	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	501	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	Ø215	Ø180	Ø250	M10	4	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
160-L	254	254	108	160	15 x 19	290	384	Ø215	Ø180	Ø250	M10	4	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2

B35 - Large Flange & Feet Mounted Dimensions







Frame Size	B35												Overall Dimensions							Shaft							
	A	B	C	H	K	AA	AD	M	N	P	T	S	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	90	71	36	56	5.8 x 8.8	110	156	Ø100	Ø80	Ø120	3	Ø7	196	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	100	80	40	63	7 x 10	120	171	Ø115	Ø95	Ø140	3	Ø10	220	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	112	90	45	71	7 x 10	132	186	Ø130	Ø110	Ø160	3.5	Ø10	241	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	112	90	45	71	7 x 10	132	186	Ø130	Ø110	Ø160	3.5	Ø10	255	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	125	100	50	80	10 x 13	160	213	Ø165	Ø130	Ø200	3.5	Ø12	290	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	140	100	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	3.5	Ø12	312	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	3.5	Ø12	337	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	3.5	Ø12	367	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	Ø215	Ø180	Ø250	4	Ø15	369	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	Ø215	Ø180	Ø250	4	Ø15	387	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	190	140	70	112	12 x 15	220	279	Ø215	Ø180	Ø250	4	Ø15	395	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	4	Ø15	437	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	4	Ø15	475	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	4	Ø15	501	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	Ø300	Ø250	Ø350	5	Ø19	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
160-L	254	254	108	160	15 x 19	290	384	Ø300	Ø250	Ø350	5	Ø19	640	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
180-M	279	241	121	180	15 x 19	340	440	Ø300	Ø250	Ø350	5	Ø19	730	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
180-L	279	279	121	180	15 x 19	340	440	Ø300	Ø250	Ø350	5	Ø19	730	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
200L	318	305	133	200	19 x 29	390	460	Ø350	Ø300	Ø400	5	Ø19	745	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	42	53	2

A3B SERIES

PARVALUX

KEY FEATURES:

- THREE PHASED BRAKE MOTORS
- IN IEC STANDARD FRAMES
- ALUMINIUM HOUSINGS
- QUICK BRAKING TIMES
- SUITABLE FOR A VARIETY OF APPLICATIONS INCLUDING THOSE THAT REQUIRE BRAKING OF LOADS OR TORQUES ON THE DRIVE SHAFT
- MULTI-MOUNT DESIGN GIVES END USERS GREATER FLEXIBILITY
- THERMISTORS AS STANDARD
- DRAIN HOLES IN DE & NDE

THREE PHASE BRAKE MOTORS IN IEC FRAMES 0.09-18.5 KW

RANGE OVERVIEW

POWER RANGE:	0.09-18.5KW
PHASE:	THREE PHASE
EFFICIENCY RATING:	NO LEGISLATION FOR PRODUCT RANGE
FRAME SIZES:	63-160
VOLTAGES:	UP TO 3KW: 230/400V 3KW AND ABOVE: 400/690V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

2 Pole - 2800 rpm With Brake

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	Speed (r/min)	Eff(%)	Power Factor (CosØ)	Current (A)			T st/Tn (times)	T max/ Tn (Times)	T min/Tn (times)	Is/In (Times)	Noise dB(A)
						230V	400V	690V					
A3B-1-2-	63-1	0.18	2710	63	0.75	0.95	0.55	0.32	2.2	2.4	1.6	6	61
A3B-1-2-	63-2	0.25	2710	65	0.78	1.23	0.71	0.41	2.2	2.4	1.6	6	61
A3B-1-2-	63-3	0.37	2710	65	0.78	1.82	1.05	0.61	2.2	2.4	1.6	6	62
A3B-1-2-	71-1	0.37	2730	70	0.79	1.67	0.97	0.56	2.2	2.4	1.6	6	64
A3B-1-2-	71-2	0.55	2760	71	0.79	2.45	1.42	0.82	2.2	2.4	1.6	6	64
A3B-1-2-	71-3	0.75	2730	72	0.82	3.18	1.83	1.06	2.2	2.4	1.5	6	65
A3B-1-2-	80-1	0.75	2770	73	0.84	3.06	1.77	1.02	2.2	2.4	1.5	6	67
A3B-1-2-	80-2	1.1	2770	76.2	0.83	4.35	2.51	1.45	2.2	2.4	1.5	6	67
A3B-1-2-	80-3	1.5	2800	78.5	0.83	5.87	3.32	1.92	2.2	2.4	1.5	6	70
A3B-1-2-	90-S	1.5	2840	78.5	0.84	5.76	3.28	1.9	2.2	2.4	1.5	6	72
A3B-1-2-	90-L1	2.2	2840	81	0.85	8	4.16	2.66	2.2	2.4	1.4	6	72
A3B-1-2-	90-L2	3	2840	82.6	0.86	10.56	6.1	35.2	2.2	2.4	1.4	6	74
A3B-1-2-	100-L1	3	2840	82.6	0.87	10.44	6.03	3.48	2.2	2.3	1.4	7	76
A3B-1-2-	100-L2	4	2850	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
A3B-1-2-	112-M	4	2880	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
A3B-1-2-	112-L	5.5	2880	85.7	0.88	18.23	10.53	6.08	2.2	2.3	1.2	7.5	78
A3B-1-2-	132-S1	5.5	2900	85.7	0.88	18.23	10.53	6.08	2	2.2	1.2	7.5	80
A3B-1-2-	132-S2	7.5	2920	87	0.88	24.49	14.14	8.16	2	2.2	1.2	7.5	80
A3B-1-2-	132-M1	9.2	2930	88	0.89	29.87	17.25	9.96	2	2.2	1.2	7.5	81
A3B-1-2-	132-M2	11	2930	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	83
A3B-1-2-	160-M1	11	2940	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	86
A3B-1-2-	160-M2	15	2940	89.4	0.91	46.09	26.61	15.36	2	2.2	1.2	7.5	86
A3B-1-2-	160-L	18.5	2940	90	0.91	56.47	32.6	18.82	2	2.2	1.1	7.5	86

Frame	Brake Type K	Brake Torque Nm	Brake Rated Power W	J Brake Pd^2 Kgm^2	No.of starts/hr Under no load Msec	Delayed Cut-in Time Msec	Quick cut-in Time Msec	Cut Out time Msec	Noise dB (A)
63	K 1	5	15	0.00005	3000	45	20	10	62
71	K 2	12	20	0.00014	3000	50	30	15	64
80	K 3	16	25	0.00021	1300	55	30	15	67
90-S	K 4	20	30	0.00039	1100	65	40	15	72
•90-S	K 4 D	40	30	0.00078	1100	65	40	15	72
90-L	K 4	20	30	0.00039	1100	65	40	15	72
•90-L	K 4 D	40	30	0.00078	1100	65	40	15	72
100-L	K 5	40	45	0.00104	900	75	45	20	76
•100-L	K 6	60	50	0.00135	900	180	85	25	76
112-MT	K 5	40	45	0.00104	880	75	45	20	77
112-M	K 6	60	50	0.00135	880	180	85	25	78
132-S	K 7	90	55	0.00219	480	200	95	50	80
•132-S	K 7 D	180	55	0.00438	480	200	95	50	80
132-M	K 7	90	55	0.00219	450	200	95	50	80
•132-M	K 7 D	180	55	0.00438	480	200	95	50	80
160-MT	K 7 D	180	55	0.00438	350	200	95	50	86
160-L	K 8	200	60	0.00408	350	210	100	60	86
•160-L	K 8 D	400	60	0.00816	350	210	100	60	86

• Motors with increased braking torque available upon request

** On request, delayed brake cut in time for lifting equipment. We recommend a double disk brake D for lifting equipment. Brake motors have a supply voltage tolerance of +/-6%*

4 Pole - 1400 rpm With Brake

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	Speed (r/min)	Eff(%)	Power Factor (CosØ)	Current (A)			T st/Tn (times)	T max/ Tn (Times)	T min/Tn (times)	Is/In (Times)	Noise dB(A)
						230V	400V	690V					
A3B-1-4-	63-1	0.12	1350	57	0.64	0.82	0.47	0.27	2.2	2.4	1.7	6	52
A3B-1-4-	63-2	0.18	1350	59	0.65	1.17	0.68	0.39	2.2	2.4	1.7	6	52
A3B-1-4-	63-3	0.25	1350	60	0.66	1.58	0.91	0.53	2.2	2.4	1.7	6	54
A3B-1-4-	71-1	0.25	1350	60	0.72	1.45	0.84	0.48	2.2	2.4	1.7	6	55
A3B-1-4-	71-2	0.37	1370	65	0.74	1.92	1.11	0.64	2.2	2.4	1.7	6	55
A3B-1-4-	71-3	0.55	1380	66	0.75	2.78	1.6	0.93	2.2	2.4	1.7	6	57
A3B-1-4-	80-1	0.55	1370	67	0.75	2.74	1.58	0.91	2.2	2.4	1.7	6	58
A3B-1-4-	80-2	0.75	1380	72	0.78	3.34	1.93	1.11	2.2	2.4	1.6	6	58
A3B-1-4-	80-3	1.1	1390	76.2	0.78	4.63	2.67	1.54	2.2	2.4	1.6	6	60
A3B-1-4-	90-S	1.1	1400	76.2	0.79	4.57	2.64	1.52	2.2	2.4	1.6	6	61
A3B-1-4-	90-L	1.5	1400	78.5	0.8	5.97	3.45	1.99	2.2	2.4	1.6	6	61
A3B-1-4-	90-L2	2.2	1400	81	0.8	8.45	4.9	2.83	2.2	2.4	1.5	7	63
A3B-1-4-	100-L1	2.2	1420	81	0.81	8.38	4.84	2.79	2.2	2.3	1.5	7	64
A3B-1-4-	100-L2	3	1420	82.6	0.81	11.21	6.47	3.74	2.2	2.3	1.5	7	64
A3B-1-4-	100-L3	4	1430	84.2	0.82	14.18	8.36	4.83	2.2	2.3	1.5	7	65
A3B-1-4-	112-M	4	1430	84.2	0.83	14.31	8.26	4.77	2.2	2.2	1.5	7	65
A3B-1-4-	112-L	5.5	1440	85.7	0.83	19.33	11.16	6.44	2.2	2.2	1.4	7	68
A3B-1-4-	132-S	5.5	1450	85.7	0.84	19.1	11.03	6.37	2.2	2.2	1.4	7	71
A3B-1-4-	132-M	7.5	1450	87	0.85	25.35	14.64	8.45	2.2	2.2	1.4	7	71
A3B-1-4-	132-L1	9.2	1460	87.5	0.85	30.92	17.85	10.31	2.2	2.2	1.4	7.5	74
A3B-1-4-	132-L2	10	1460	88	0.85	33.42	19.3	11.14	2.2	2.2	1.4	7.5	74
A3B-1-4-	132-L2	11	1460	88.4	0.86	36.17	20.88	12.06	2.2	2.2	1.4	7.5	74
A3B-1-4-	160-M	11	1460	88.4	0.87	35.76	20.64	11.92	2.2	2.2	1.4	7	75
A3B-1-4-	160-L	15	1460	88.4	0.87	48.76	28.15	16.25	2.2	2.2	1.4	7.5	75

Frame	Brake Type K	Brake Torque Nm	Brake Rated Power W	J Brake Pd^2 Kgm^2	No.of starts/hr Under no load Msec	Delayed Cut-in Time Msec	Quick cut-in Time Msec	Cut Out time Msec	Noise dB (A)
63	K 1	5	15	0.00005	3000	45	20	10	52
71	K 2	12	20	0.00014	3000	50	30	15	55
80	K 3	16	25	0.00021	1300	55	30	15	58
90-S	K 4	20	30	0.00039	1100	65	40	15	61
•90-S	K 4 D	40	30	0.00078	1100	65	40	15	61
90-L	K 4	20	30	0.00039	1100	65	40	15	63
•90-L	K 4 D	40	30	0.00078	1100	65	40	15	63
100-L	K 5	40	45	0.00104	900	75	45	20	64
•100-L	K 6	60	50	0.00135	900	180	85	25	65
112-MT	K 5	40	45	0.00104	880	75	45	20	65
112-M	K 6	60	50	0.00135	880	180	85	25	65
132-S	K 7	90	55	0.00219	480	200	95	50	71w
•132-S	K 7 D	180	55	0.00438	480	200	95	50	71
132-M	K 7	90	55	0.00219	450	200	95	50	71
•132-M	K 7 D	180	55	0.00438	480	200	95	50	71
160-MT	K 7 D	180	55	0.00438	350	200	95	50	75
160-L	K 8	200	60	0.00408	350	210	100	60	75
•160-L	K 8 D	400	60	0.00816	350	210	100	60	75

• Motors with increased braking torque available upon request

** On request, delayed brake cut in time for lifting equipment. We recommend a double disk brake D for lifting equipment. Brake motors have a supply voltage tolerance of +/-6%*

A3B Series

6 Pole - 900 rpm With Brake

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	Speed (r/min)	Eff(%)	Power Factor (CosØ)	Current (A)			T st/Tn (times)	T max/ Tn (Times)	T min/Tn (times)	Is/In (Times)	Noise dB(A)
						230V	400V	690V					
A3B-1-6-	63-1	0.09	840	42	0.61	0.88	0.51	0.29	2	2	1.5	3.5	50
A3B-1-6-	63-2	0.12	850	45	0.62	1.08	0.62	0.36	2	2	1.5	3.5	50
A3B-1-6-	71-1	0.18	880	56	0.66	1.22	0.7	0.41	1.6	1.7	1.5	4	52
A3B-1-6-	71-2	0.25	900	59	0.7	1.51	0.87	0.5	2.1	2.2	1.5	4	52
A3B-1-6-	71-3	0.37	890	61	0.69	2.2	1.27	0.73	2	2.1	1.5	4	54
A3B-1-6-	80-1	0.37	900	62	0.7	2.13	1.23	0.71	1.9	1.9	1.5	4	56
A3B-1-6-	80-2	0.55	900	67	0.72	2.85	1.65	0.95	2	2.3	1.5	4	56
A3B-1-6-	80-3	0.75	900	68	0.72	3.83	2.21	1.28	2	2.3	1.5	4	58
A3B-1-6-	90-S	0.75	920	69	0.72	3.77	2.18	1.26	2.2	2.2	1.5	5.5	59
A3B-1-6-	90-L	1.1	925	72	0.73	5.23	3.02	1.74	2.2	2.2	1.3	5.5	59
A3B-1-6-	100-L	1.5	945	74	0.76	6.67	3.85	2.22	2.2	2.2	1.3	6	61
A3B-1-6-	112-M	2.2	955	78	0.76	9.28	5.36	3.09	2.2	2.2	1.3	6	64
A3B-1-6-	132-S	3	960	79	0.76	12.49	7.21	4.16	2	2	1.3	6.5	64
A3B-1-6-	132-M1	4	960	80.5	0.76	16.35	9.44	5.45	2	2	1.3	6.5	68
A3B-1-6-	132-M2	5.5	960	83	0.77	21.51	12.42	7.17	2	2	1.3	6.5	68
A3B-1-6-	132-L	7.5	960	85	0.77	28.65	16.54	9.55	2	2	1.3	6.5	68
A3B-1-6-	160-M	7.5	960	86	0.8	27.25	15.73	9.08	2	2.2	1.3	6.5	68
A3B-1-6-	160-L	11	960	87.5	0.79	39.78	22.97	13.26	2	2.2	1.2	6.5	73

Frame	Brake Type K	Brake Torque Nm	Brake Rated Power W	J Brake Pd^2 Kgm^2	No.of starts/hr Under no load Msec	Delayed Cut-in Time Msec	Quick cut-in Time Msec	Cut Out time Msec	Noise dB (A)
63	K 1	5	15	0.00005	3000	45	20	10	50
71	K 2	12	20	0.00014	3000	50	30	15	52
80	K 3	16	25	0.00021	1300	55	30	15	56
90-S	K 4	20	30	0.00039	1100	65	40	15	59
•90-S	K 4 D	40	30	0.00078	1100	65	40	15	59
90-L	K 4	20	30	0.00039	1100	65	40	15	59
•90-L	K 4 D	40	30	0.00078	1100	65	40	15	59
100-L	K 5	40	45	0.00104	900	75	45	20	61
•100-L	K 6	60	50	0.00135	900	180	85	25	61
112-MT	K 5	40	45	0.00104	880	75	45	20	64
112-M	K 6	60	50	0.00135	880	180	85	25	64
132-S	K 7	90	55	0.00219	480	200	95	50	64
•132-S	K 7 D	180	55	0.00438	480	200	95	50	64
132-M	K 7	90	55	0.00219	450	200	95	50	68
•132-M	K 7 D	180	55	0.00438	480	200	95	50	68
160-MT	K 7 D	180	55	0.00438	350	200	95	50	68
160-L	K 8	200	60	0.00408	350	210	100	60	73
•160-L	K 8 D	400	60	0.00816	350	210	100	60	73

• Motors with increased braking torque available upon request

** On request, delayed brake cut in time for lifting equipment. We recommend a double disk brake D for lifting equipment. Brake motors have a supply voltage tolerance of +/-6%*

8 Pole - 700 rpm With Brake

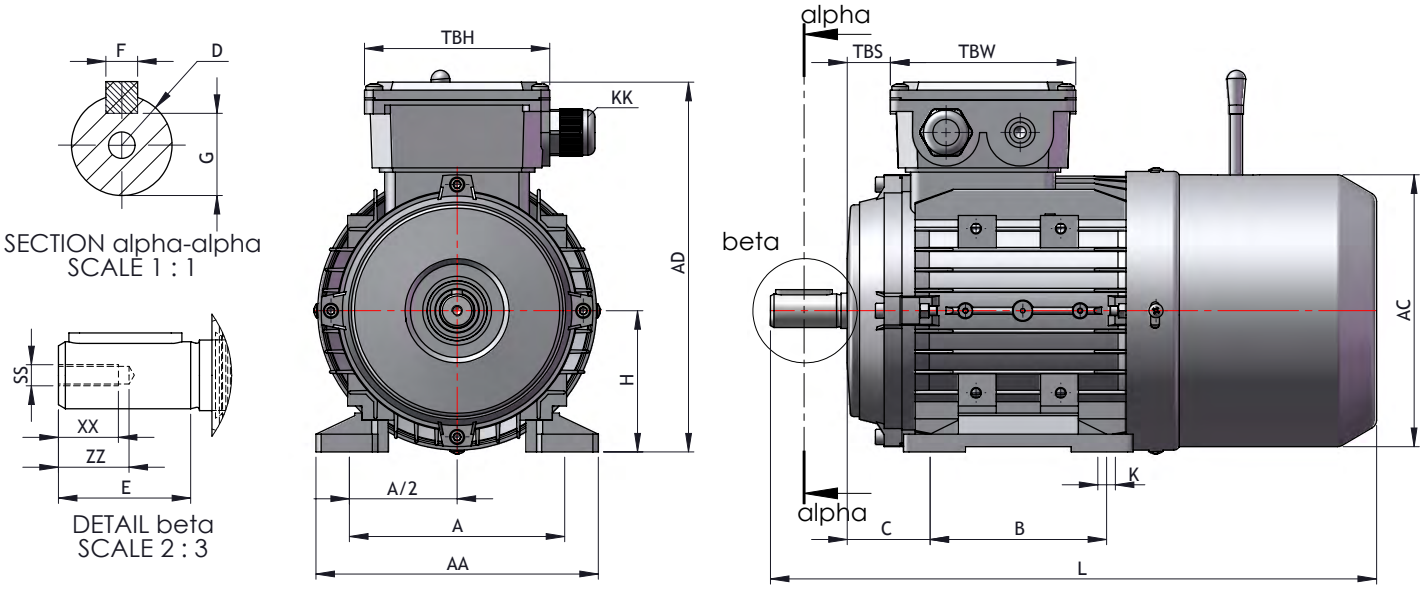
IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (KW)	Speed (r/min)	Eff(%)	Power Factor (CosØ)	Current (A)			T st/Tn (times)	T max/ T n (Times)	T min/Tn (times)	Is/In (Times)	Noise dB(A)
						230V	400V	690V					
A3B-1-8-	71-1	0.09	680	48	0.56	0.84	0.48	0.28	1.5	1.7	1.3	3	50
A3B-1-8-	71-2	0.12	690	51	0.59	1	0.58	0.33	1.6	1.7	1.3	2.7	50
A3B-1-8-	80-1	0.18	680	51	0.61	1.45	0.84	0.48	1.5	1.7	1.3	2.8	52
A3B-1-8-	80-2	0.25	680	56	0.61	1.83	1.06	0.61	1.6	2	1.3	2.7	52
A3B-1-8-	90-S	0.37	680	63	0.63	2.33	1.35	0.78	1.6	1.8	1.3	2.8	56
A3B-1-8-	90-L	0.55	680	66	0.65	3.21	1.85	1.07	1.6	1.8	1.3	3	56
A3B-1-8-	100-L1	0.75	710	66	0.67	4.24	2.45	1.41	1.7	2.1	1.3	3.5	59
A3B-1-8-	100-L2	1.1	710	72	0.69	5.54	3.2	1.85	1.7	2.1	1.2	3.5	59
A3B-1-8-	112-M	1.5	710	74	0.68	7.45	4.3	2.48	1.8	2.1	1.2	4.2	61
A3B-1-8-	132-S	2.2	720	75	0.71	10.33	5.96	3.44	2	2	1.2	5.5	64
A3B-1-8-	132-M	3	720	77	0.73	13.34	7.7	4.45	2	2	1.2	5.5	64
A3B-1-8-	160-M1	4	730	80	0.73	17.12	9.89	5.71	1.9	2.1	1.2	6	68
A3B-1-8-	160-M2	5.5	720	83.5	0.74	22.25	12.85	7.42	2	2.2	1.2	6	68
A3B-1-8-	160-L	7.5	720	85	0.75	29.41	17	9.8	1.9	2.2	1.2	6	68

Frame	Brake Type K	Brake Torque Nm	Brake Rated Power W	J Brake Pd^2 Kgm^2	No.of starts/hr Under no load Msec	Delayed Cut-in Time Msec	Quick cut-in Time Msec	Cut Out time Msec	Noise dB (A)
63	K 1	5	15	0.00005	3000	45	20	10	50
71	K 2	12	20	0.00014	3000	50	30	15	50
80	K 3	16	25	0.00021	1300	55	30	15	52
90-S	K 4	20	30	0.00039	1100	65	40	15	56
•90-S	K 4 D	40	30	0.00078	1100	65	40	15	56
90-L	K 4	20	30	0.00039	1100	65	40	15	56
•90-L	K 4 D	40	30	0.00078	1100	65	40	15	56
100-L	K 5	40	45	0.00104	900	75	45	20	59
•100-L	K 6	60	50	0.00135	900	180	85	25	59
112-MT	K 5	40	45	0.00104	880	75	45	20	61
112-M	K 6	60	50	0.00135	880	180	85	25	61
132-S	K 7	90	55	0.00219	480	200	95	50	64
•132-S	K 7 D	180	55	0.00438	480	200	95	50	64
132-M	K 7	90	55	0.00219	450	200	95	50	64
•132-M	K 7 D	180	55	0.00438	480	200	95	50	64
160-MT	K 7 D	180	55	0.00438	350	200	95	50	68
160-L	K 8	200	60	0.00408	350	210	100	60	68
•160-L	K 8 D	400	60	0.00816	350	210	100	60	68

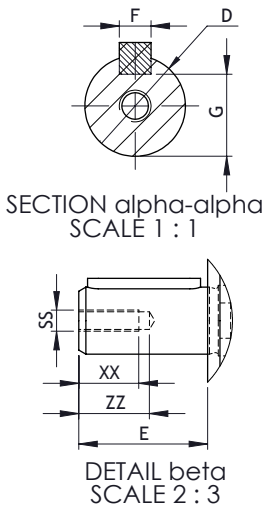
• Motors with increased braking torque available upon request
** On request, delayed brake cut in time for lifting equipment. We recommend a double disk brake D for lifting equipment. Brake motors have a supply voltage tolerance of +/-6%*

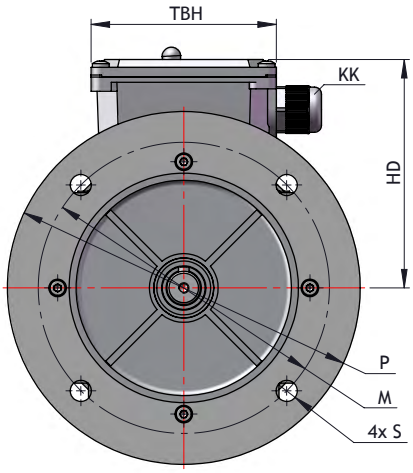
B3 - Foot Mounted Dimensions

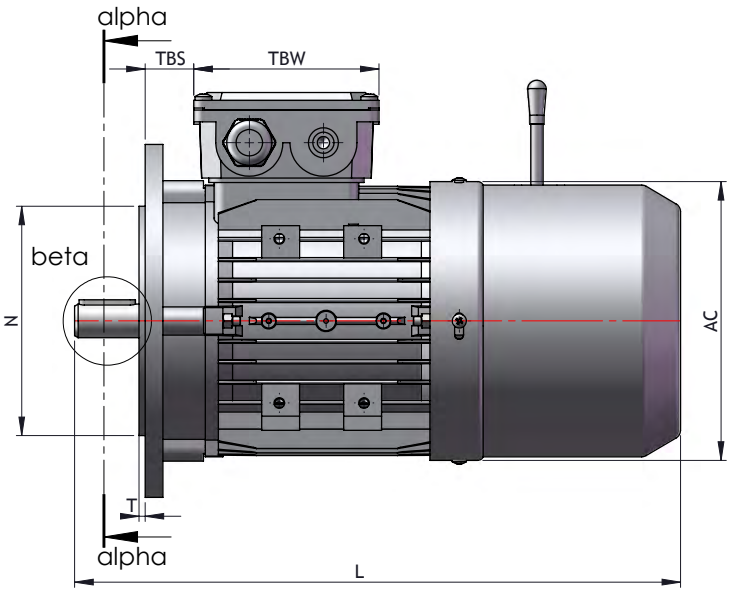


Frame Size	B3							Overall Dimensions							Shaft								
	A	B	C	H	K	AA	AD	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	CC	XX	ZZ	Y
56	90	71	36	56	5.8 x 8.8	110	156	232	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	2.5	9	12	0.5
63	100	80	40	63	7 x 10	120	171	258	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	3.3	10	14	0.8
71-1	112	90	45	71	7 x 10	132	186	285	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	4.2	12	17	0.8
71 -2/3	112	90	45	71	7 x 10	132	186	296	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	4.2	12	17	0.8
80	125	100	50	80	10 x 13	160	213	339	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	5	16	21	1
90S	140	100	56	90	10 x 13	175	229	361	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	386	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	416	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	425	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	443	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
112	190	140	70	112	12 x 15	220	279	463	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	497	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	535	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	561	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	14.2	36	45	2
160-L	254	254	108	160	15 x 19	290	384	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	14.2	36	45	2
180-M	279	241	121	180	15 x 19	340	440	790	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	14.2	36	45	2
180-L	279	279	121	180	15 x 19	340	440	790	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	14.2	36	45	2
200-L	318	305	133	200	19 x 29	390	460	815	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	17.5	42	53	2

B5 - Large Flange Mounted Dimensions

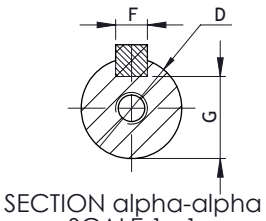




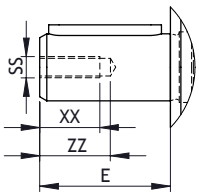


Frame Size	B5					Overall Dimensions							Shaft								
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	CC	XX	ZZ	Y
56	Ø100	Ø80	Ø120	3	Ø7	232	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	2.5	9	12	0.5
63	Ø115	Ø95	Ø140	3	Ø10	258	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	3.3	10	14	0.8
71-1	Ø130	Ø110	Ø160	3.5	Ø10	285	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	4.2	12	17	0.8
71 -2/3	Ø130	Ø110	Ø160	3.5	Ø10	296	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	4.2	12	17	0.8
80	Ø165	Ø130	Ø200	3.5	Ø12	339	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	5	16	21	1
90S	Ø165	Ø130	Ø200	3.5	Ø12	361	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
90-L1	Ø165	Ø130	Ø200	3.5	Ø12	386	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
90-L2	Ø165	Ø130	Ø200	3.5	Ø12	416	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	6.8	19	25	1
100-L1	Ø215	Ø180	Ø250	4	Ø15	425	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
100-L2	Ø215	Ø180	Ø250	4	Ø15	443	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
112	Ø215	Ø180	Ø250	4	Ø15	463	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	8.5	22	30	1.5
132-S	Ø265	Ø230	Ø300	4	Ø15	497	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
132-M	Ø265	Ø230	Ø300	4	Ø15	535	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
132-L	Ø265	Ø230	Ø300	4	Ø15	561	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	10.2	28	37	1.5
160-ML	Ø300	Ø250	Ø350	5	Ø19	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	14.2	36	45	2
180-ML	Ø300	Ø250	Ø350	5	Ø19	790	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	14.2	36	45	2
200-L	Ø350	Ø300	Ø400	5	Ø19	815	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	17.5	42	53	2

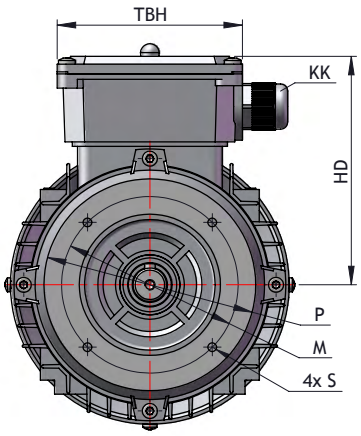
B14 - Face Mounted Dimensions

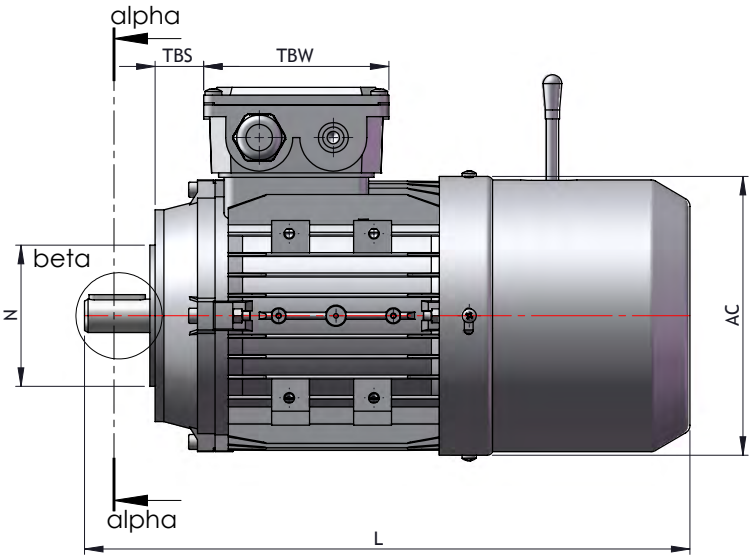


SECTION alpha-alpha
SCALE 1 : 1



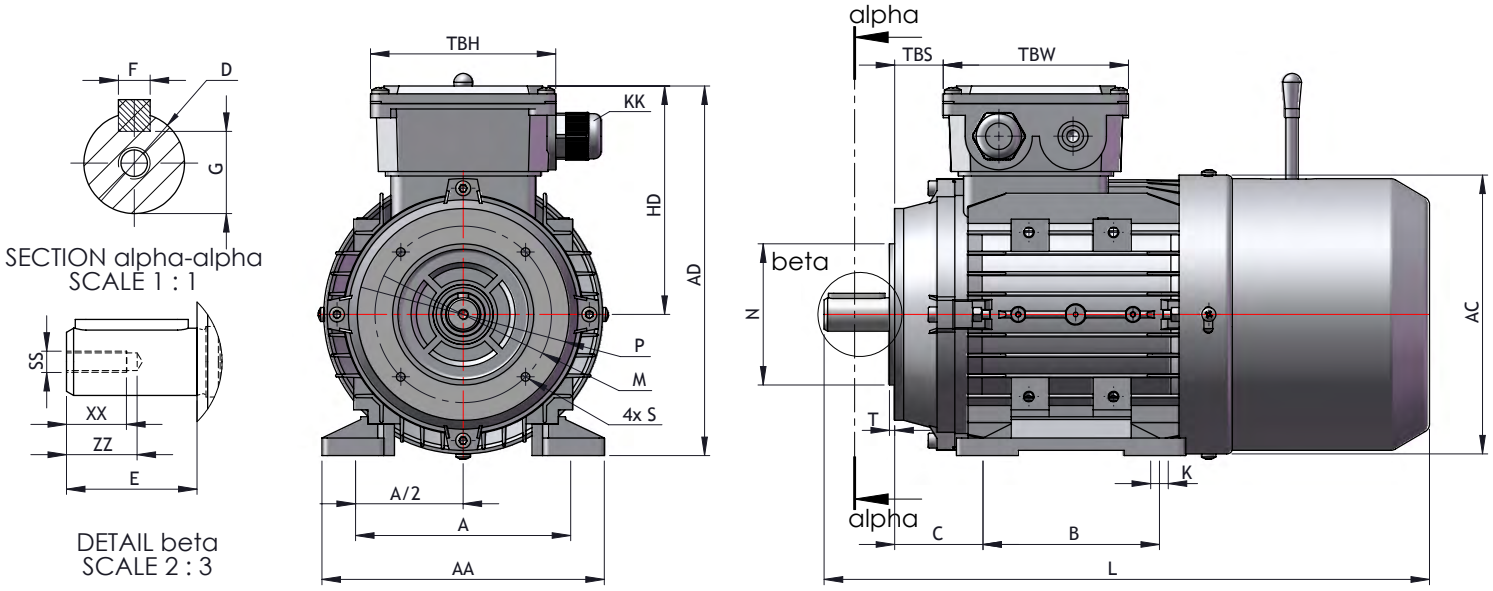
DETAIL beta
SCALE 2 : 3





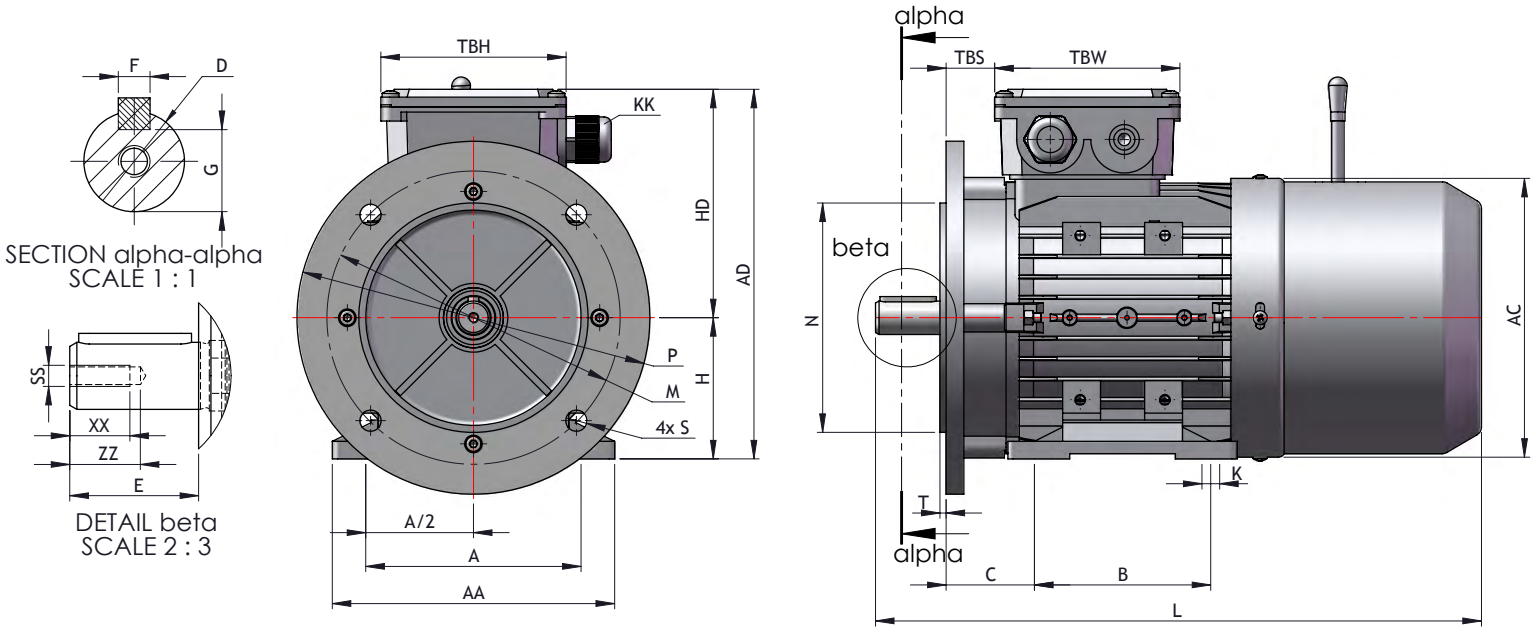
Frame Size	B14					Overall Dimensions							Shaft							
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	Ø65	Ø50	Ø80	M5	2.5	232	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	Ø75	Ø60	Ø90	M5	2.5	258	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	Ø85	Ø70	Ø105	M6	2.5	282	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	Ø85	Ø70	Ø105	M6	2.5	296	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	Ø110	Ø80	Ø120	M6	3	339	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	Ø115	Ø95	Ø140	M8	3	361	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	Ø115	Ø95	Ø140	M8	3	386	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	Ø115	Ø95	Ø140	M8	3	416	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	Ø130	Ø110	Ø160	M8	3.5	425	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	Ø130	Ø110	Ø160	M8	3.5	443	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	Ø130	Ø110	Ø160	M8	3.5	463	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	Ø165	Ø130	Ø200	M10	4	497	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	Ø165	Ø130	Ø200	M10	4	535	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	Ø165	Ø130	Ø200	M10	4	561	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M/L	Ø215	Ø180	Ø250	M10	4	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2

B34 - Face & Feet Mounted Dimensions



Frame Size	B34												Overall Dimensions							Shaft							
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	90	71	36	56	5.8x8.8	110	156	Ø65	Ø50	Ø80	M5	2.5	232	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	100	80	40	63	7 x 10	120	171	Ø75	Ø60	Ø90	M5	2.5	258	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	112	90	45	71	7 x 10	132	186	Ø85	Ø70	Ø105	M6	2.5	282	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71 -2/3	112	90	45	71	7 x 10	132	186	Ø85	Ø70	Ø105	M6	2.5	296	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	125	100	50	80	10 x 13	160	213	Ø110	Ø80	Ø120	M6	3	339	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	140	100	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	361	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	386	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	Ø115	Ø95	Ø140	M8	3	416	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	Ø130	Ø110	Ø160	M8	3.5	425	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	Ø130	Ø110	Ø160	M8	3.5	443	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	190	140	70	112	12 x 15	220	279	Ø130	Ø110	Ø160	M8	3.5	463	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	497	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	535	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	Ø165	Ø130	Ø200	M10	4	561	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	Ø215	Ø180	Ø250	M10	4	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
160-L	254	254	108	160	15 x 19	290	384	Ø215	Ø180	Ø250	M10	4	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2

B35 - Large Flange & Feet Mounted Dimensions



Frame Size	B35												Overall Dimensions							Shaft							
	A	B	C	H	K	AA	AD	M	N	P	T	S	L	AC	HD	TBS	TBW	TBH	KK	D	E	F	G	SS	XX	ZZ	Y
56	90	71	36	56	5.8x8.8	110	156	Ø100	Ø80	Ø120	Ø7	3	232	Ø117	100	14	14	88	1-M16x1.5	Ø9	20	3	7.2	M3	9	12	0.5
63	100	80	40	63	7 x 10	120	171	Ø115	Ø95	Ø140	Ø10	3	258	Ø130	108	14	14	94	1-M16x1.5	Ø11	23	4	8.5	M4	10	14	0.8
71	112	90	45	71	7 x 10	132	186	Ø130	Ø110	Ø160	Ø10	3.5	282	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
71-2/3	112	90	45	71	7 x 10	132	186	Ø130	Ø110	Ø160	Ø10	3.5	296	Ø132	115	20	20	94	1-M20x1.5	Ø14	30	5	11	M5	12	17	0.8
80	125	100	50	80	10 x 13	160	213	Ø165	Ø130	Ø200	Ø12	3.5	339	Ø163	133	27	27	105	1-M20x1.5	Ø19	40	6	15.5	M6	16	21	1
90-S	140	100	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	Ø12	3.5	361	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L1	140	125	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	Ø12	3.5	386	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
90-L2	140	125	56	90	10 x 13	175	229	Ø165	Ø130	Ø200	Ø12	3.5	416	Ø183	139	30	30	105	1-M20x1.5	Ø24	50	8	20	M8	19	25	1
100-L1	160	140	63	100	12 x 15	198	252	Ø215	Ø180	Ø250	Ø15	4	425	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
100-L2	160	140	63	100	12 x 15	198	252	Ø215	Ø180	Ø250	Ø15	4	443	Ø205	152	26	26	105	2-M20x1.5	Ø28	60	8	24	M10	22	30	1.5
112	190	140	70	112	12 x 15	220	279	Ø215	Ø180	Ø250	Ø15	4	463	Ø229	167	32	32	112	2-M25x1.5	Ø28	60	8	24	M10	22	30	1.5
132-S	216	140	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	Ø15	4	497	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-M	216	178	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	Ø15	4	535	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
132-L	216	178	89	132	12 x 15	252	318	Ø265	Ø230	Ø300	Ø15	4	561	Ø265	186	38	38	112	2-M25x1.5	Ø38	80	10	33	M12	28	37	1.5
160-M	254	210	108	160	15 x 19	290	384	Ø300	Ø250	Ø350	Ø19	5	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
160-L	254	254	108	160	15 x 19	290	384	Ø300	Ø250	Ø350	Ø19	5	697	Ø325	224	64	64	143	2-M32x1.5	Ø42	110	12	37	M16	36	45	2
180-M	279	241	121	180	15 x 19	340	440	Ø300	Ø250	Ø350	Ø19	5	790	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
180-L	279	279	121	180	15 x 19	340	440	Ø300	Ø250	Ø350	Ø19	5	790	Ø368	260	73	73	190	2-M32x1.5	Ø48	110	14	42.5	M18	36	45	2
200L	318	305	133	200	19 x 29	390	460	Ø350	Ø300	Ø400	Ø19	5	815	Ø368	260	85	85	190	2-M40x1.5	Ø55	110	16	49	M20	42	53	2

A3H SERIES

KEY FEATURES:

- THREE PHASED HIGH EFFICIENCY AC MOTORS
- IN IEC STANDARD FRAMES
- ALUMINIUM HOUSINGS
- IE2 & IE3
- LIGHTWEIGHT YET RUGGED AND SUITABLE FOR MANY APPLICATIONS INCLUDING: PUMPS, FANS, COMPRESSORS, MINING, AGRICULTURAL, MARITIME, HYDRAULIC ETC
- AVAILABLE IN FRAMES 80-200
- MULTI-MOUNT DESIGN GIVES END USERS GREATER FLEXIBILITY
- DRAIN HOLES IN DE & NDE, THERMISTERS AS STANDARD

THREE PHASE HIGH EFFICIENCY MOTORS IN IEC FRAMES 0.75-37 KW

RANGE OVERVIEW

POWER RANGE:	0.75-37KW
PHASE:	THREE PHASE
EFFICIENCY RATING:	IE2 - HIGH EFFICIENCY & IE3 - PREMIUM EFFICIENCY
FRAME SIZES:	80-200
VOLTAGES:	UP TO 3KW: 230/400V 3KW AND ABOVE: 400/690V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B14, B34, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

IE2 2 Pole - 2800 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-2-2-	80-1	0.75	2848	1.86	77.4	0.75	2.51	6	2.7	2.1	2.8
A3H-2-2-	80-2	1.1	2846	2.52	79.6	0.79	3.69	6.7	2.7	2.1	2.9
A3H-2-2-	90-S	1.5	2852	3.17	81.3	0.84	5.02	6.1	2.3	2	2.7
A3H-2-2-	90-L	2.2	2845	4.54	83.2	0.84	7.38	7	2.6	2.1	2.7
A3H-2-2-	100-L	3	2851	5.75	84.6	0.89	10.05	7.6	2.5	2	2.8
A3H-2-2-	112-M	4	2910	7.56	85.8	0.89	13.13	7.8	2.5	2	2.7
A3H-2-2-	132-S1	5.5	2905	10.25	87	0.89	18.08	7.8	2.4	2	2.9
A3H-2-2-	132-S2	7.5	2910	13.96	88.1	0.88	24.61	7.9	2.7	2	2.8
A3H-2-2-	160-M1	11	2920	19.73	89.4	0.9	35.97	7.9	2.2	2.1	3
A3H-2-2-	160-M2	15	2918	26.35	90.3	0.91	49.09	7.9	2.3	2.1	3
A3H-2-2-	160-L	18.5	2922	31.93	90.9	0.92	60.46	8	2.4	2.1	2.9
A3H-2-2-	180-M	22	2930	39.08	91.3	0.89	71.7	7.5	2.3	2	2.8
A3H-2-2-	200-L1	30	2925	53.49	92	0.88	97.94	6.7	2.4	2	2.7
A3H-2-2-	200-L2	37	2930	64.15	92.5	0.9	120.59	6.3	2.3	2	2.7

IE2 4 Pole - 1400 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-2-4-	80-2	0.75	1420	1.79	79.6	0.76	5.04	5.4	2.3	2.1	2.9
A3H-2-4-	90-S	1.1	1425	2.5	81.4	0.78	7.37	5.9	2.3	2.1	2.7
A3H-2-4-	90-L	1.5	1420	3.31	82.8	0.79	10.09	6.4	2.4	2	2.7
A3H-2-4-	100-L1	2.2	1430	4.59	84.3	0.82	14.69	6.6	2.4	2.1	2.9
A3H-2-4-	100-L2	3	1430	6.33	85.5	0.8	20.03	6.9	2.4	2	2.8
A3H-2-4-	112-M	4	1435	8.44	86.6	0.79	26.62	7.9	2.5	2	3
A3H-2-4-	132-S	5.5	1430	11.04	87.7	0.82	36.73	7.1	2.3	2	2.8
A3H-2-4-	132-M	7.5	1430	14.7	88.7	0.83	50.08	7.8	2.3	2	2.7
A3H-2-4-	160-M	11	1440	19.43	89.8	0.91	72.95	7.9	2.5	2.1	2.8
A3H-2-4-	160-L	15	1445	25.92	90.8	0.92	99.13	7.8	2.4	2.1	2.9
A3H-2-4-	180-M	18.5	1445	33.66	91.2	0.87	122.26	7.8	2.4	2.1	3
A3H-2-4-	180-L	22	1460	38.95	91.6	0.89	143.89	7.5	2.3	2	3
A3H-2-4-	200-L2	30	1460	55.31	92.3	0.88	196.22	7.9	2.4	2	2.7

IE2 6 Pole - 900 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-2-6-	90-S	0.75	935	1.88	75.9	0.76	7.66	6.2	2.2	2	2.7
A3H-2-6-	90-L	1.1	935	2.54	78.1	0.8	11.23	6	2.3	2.1	2.6
A3H-2-6-	100-L	1.5	940	3.31	79.8	0.82	15.24	5.8	2.3	2.1	2.7
A3H-2-6-	112-M	2.2	940	4.85	81.8	0.8	22.35	6.4	2.3	2.1	2.9
A3H-2-6-	132-S	3	940	6.26	83.3	0.83	30.48	6.3	2.4	2.2	2.8
A3H-2-6-	132-M1	4	945	8.12	84.6	0.84	40.42	6.2	2.5	2	2.8
A3H-2-6-	132-M2	5.5	945	11.26	86	0.82	55.58	6.8	2.3	1.9	2.8
A3H-2-6-	160-M	7.5	955	14.78	87.2	0.84	74.99	7	2.4	1.9	2.7
A3H-2-6-	160-L	11	960	21.06	88.7	0.85	109.42	7.3	2.5	2	2.8
A3H-2-6-	180-L	15	960	29.08	89.7	0.83	149.21	7.8	2.3	2.1	2.9
A3H-2-6-	200-L1	18.5	965	34.75	90.4	0.85	183.07	7.8	2.4	2.1	3.2
A3H-2-6-	200-L2	22	965	40.62	90.9	0.86	217.7	7.9	2.3	1.9	3.1

IE3 2 Pole - 2800 rpm

IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-3-2-	80-1	0.75	2848	1.79	80.7	0.75	2.51	6	2.7	2.1	2.8
A3H-3-2-	80-2	1.1	2846	2.43	82.7	0.79	3.69	6.7	2.7	2.1	2.9
A3H-3-2-	90-S	1.5	2852	3.06	84.3	0.84	5.02	6.1	2.3	2	2.7
A3H-3-2-	90-L	2.2	2845	4.4	85.9	0.84	7.38	7	2.6	2.1	2.7
A3H-3-2-	100-L	3	2851	5.59	87.1	0.89	10.05	7.6	2.5	2	2.8
A3H-3-2-	112-M	4	2910	7.36	88.1	0.89	13.13	7.8	2.5	2	2.7
A3H-3-2-	132-S1	5.5	2905	10	89.2	0.89	18.08	7.8	2.4	2	2.9
A3H-3-2-	132-S2	7.5	2910	13.65	90.1	0.88	24.61	7.9	2.7	2	2.8
A3H-3-2-	160-M1	11	2920	19.34	91.2	0.9	35.97	7.9	2.2	2.1	3
A3H-3-2-	160-M2	15	2918	25.89	91.9	0.91	49.09	7.9	2.3	2.1	3
A3H-3-2-	160-L	18.5	2922	31.41	92.4	0.92	60.46	8	2.4	2.1	2.9
A3H-3-2-	180-M	22	2930	38.49	92.7	0.89	71.7	7.5	2.3	2	2.8
A3H-3-2-	200-L1	30	2925	52.74	93.3	0.88	97.94	6.7	2.4	2	2.7
A3H-3-2-	200-L2	37	2930	63.33	93.7	0.9	120.59	6.3	2.3	2	2.7

IE3 4 Pole - 1400 rpm

IEC Three Phase Aluminium Motors

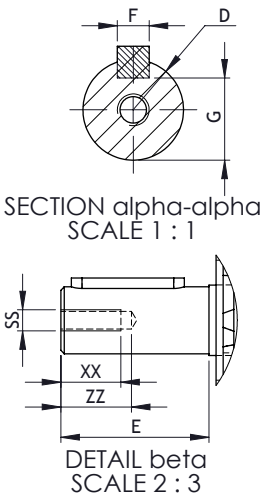
MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-3-4-	80-2	0.75	1420	1.73	82.5	0.76	5.04	5.4	2.3	2.1	2.9
A3H-3-4-	90-S	1.1	1425	2.42	84.1	0.78	7.37	5.9	2.3	2.1	2.7
A3H-3-4-	90-L	1.5	1420	3.21	85.3	0.79	10.09	6.4	2.4	2	2.7
A3H-3-4-	100-L1	2.2	1430	4.47	86.7	0.82	14.69	6.6	2.4	2.1	2.9
A3H-3-4-	100-L2	3	1430	6.17	87.7	0.8	20.03	6.9	2.4	2	2.8
A3H-3-4-	112-M	4	1435	8.25	88.6	0.79	26.62	7.9	2.5	2	3
A3H-3-4-	132-S	5.5	1430	10.81	89.6	0.82	36.73	7.1	2.3	2	2.8
A3H-3-4-	132-M	7.5	1430	14.43	90.4	0.83	50.08	7.8	2.3	2	2.7
A3H-3-4-	160-M	11	1440	19.09	91.4	0.91	72.95	7.9	2.5	2.1	2.8
A3H-3-4-	160-L	15	1445	25.55	92.1	0.92	99.13	7.8	2.4	2.1	2.9
A3H-3-4-	180-M	18.5	1445	33.15	92.6	0.87	122.26	7.8	2.4	2.1	3
A3H-3-4-	180-L	22	1460	38.37	93	0.89	143.89	7.5	2.3	2	3
A3H-3-4-	200-L2	30	1460	52.57	93.6	0.88	196.22	7.9	2.4	2	2.7

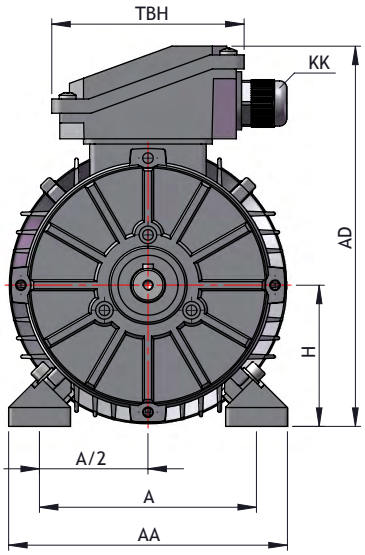
IE3 6 Pole - 900 rpm

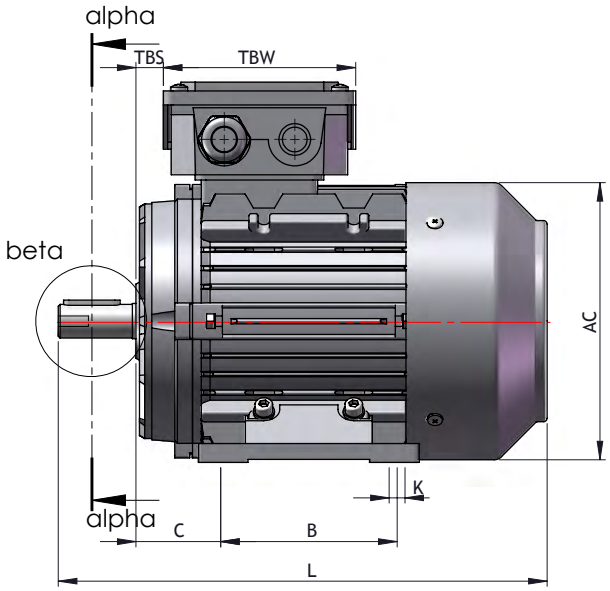
IEC Three Phase Aluminium Motors

MODEL	FRAME	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/Cn
A3H-2-6-	90-S	0.75	935	1.81	78.9	0.78	7.66	6.2	2.2	2	2
A3H-2-6-	90-L	1.1	935	2.45	81	0.8	11.23	6	2.3	2.1	2.1
A3H-2-6-	100-L	1.5	940	3.2	82.5	0.82	15.24	5.8	2.3	2.1	2.1
A3H-2-6-	112-M	2.2	940	4.71	84.3	0.8	22.35	6.4	2.3	2.1	2.1
A3H-2-6-	132-S	3	940	6.09	85.6	0.83	30.48	6.3	2.4	2.2	2.2
A3H-2-6-	132-M1	4	945	7.92	86.8	0.84	40.42	6.2	2.5	2	2
A3H-2-6-	132-M2	5.5	945	11	88	0.82	55.58	6.6	2.3	1.9	1.9
A3H-2-6-	160-M	7.5	955	14.46	89.1	0.84	74.99	7	2.4	1.9	1.9
A3H-2-6-	160-L	11	960	20.69	90.3	0.85	109.42	7.3	2.5	2	2
A3H-2-6-	180-L	15	960	28.6	91.2	0.83	149.21	7.8	2.3	2.1	2.1
A3H-2-6-	200-L1	18.5	965	34.26	91.7	0.85	183.07	7.8	2.4	2.1	2.1
A3H-2-6-	200-L2	22	965	40.05	92.2	0.86	217.7	7.9	2.3	1.9	1.9

B3 - Foot Mounted Dimensions

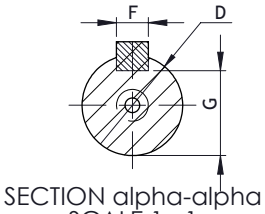




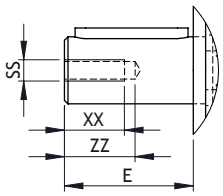


Frame Size	B3							Overall Dimensions						Shaft				
	A	B	C	H	K	AA	AD	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
80	125	100	50	80	Ø9	160	220	280	Ø 158	140	16	97	97	Ø19	40	6	15.5	M6*16
90-S	140	100	56	90	Ø10	175	240	325	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
90-L	140	125	56	90	Ø10	175	240	350	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
100	160	140	63	100	Ø12	200	265	388	Ø 199	165	20	118	118	Ø28	60	8	24	M10*22
112	190	140	70	112	Ø12	230	291	405	Ø 220	179	29	118	118	Ø28	60	8	24	M10*22
132-S	216	140	89	132	Ø12	255	332	467	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	216	178	89	132	Ø12	255	332	505	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
160-M	254	210	108	160	Ø15	314	402	605	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
160-L	254	254	108	160	Ø15	314	402	650	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
180-M	279	241	121	180	Ø15	348	439	687	Ø 360	259	160	162	187	Ø48	110	14	42.5	M16*36
180-L	279	279	121	180	Ø15	348	439	725	Ø 360	259	180	162	187	Ø48	110	14	42.5	M16*36
200L	318	305	133	200	Ø19	388	497	768	Ø 399	297	192	186	233	Ø55	110	16	49	M20*42

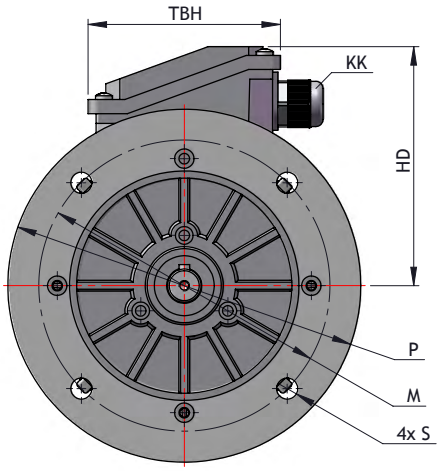
B5 - Large Flange Mounted Dimensions

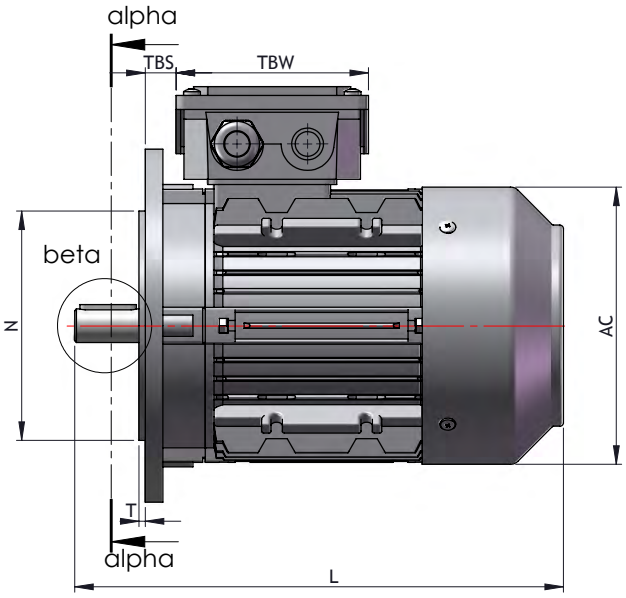


SECTION alpha-alpha
SCALE 1 : 1



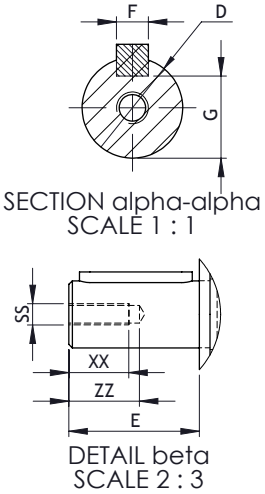
DETAIL beta
SCALE 2 : 3

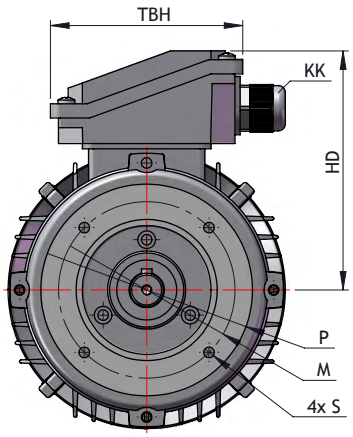


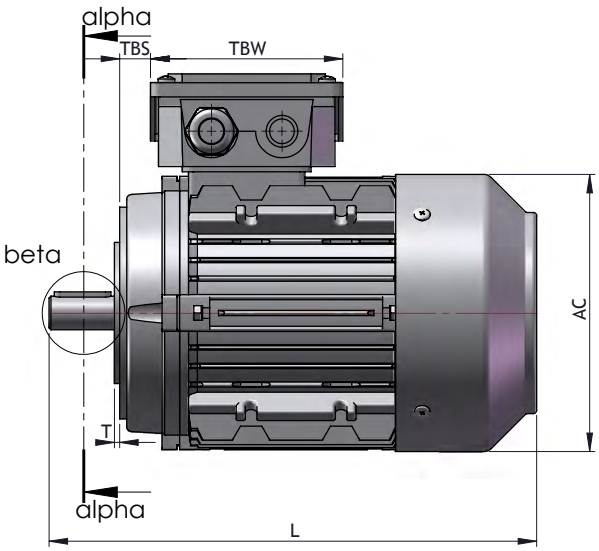


Frame Size	B5					Overall Dimensions						Shaft				
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
80	Ø 165	Ø 130	Ø 198	4-Ø12	3.5	280	Ø 158	140	16	97	97	Ø19	40	6	15.5	M6*16
90-S	Ø 165	Ø 130	Ø 198	4-Ø12	3.5	325	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
90-L	Ø 165	Ø 130	Ø 198	4-Ø12	3.5	350	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
100	Ø 215	Ø 180	Ø 250	4-Ø15	4	388	Ø 199	165	20	118	118	Ø28	60	8	24	M10*22
112	Ø 215	Ø 180	Ø 250	4-Ø15	4	405	Ø 220	179	29	118	118	Ø28	60	8	24	M10*22
132-S	Ø 265	Ø 230	Ø 300	4-Ø15	4	467	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	Ø 265	Ø 230	Ø 300	4-Ø15	4	505	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
160-M	Ø 300	Ø 250	Ø 350	4-Ø19	5	605	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
160-L	Ø 300	Ø 250	Ø 350	4-Ø19	5	650	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
180-M	Ø 300	Ø 250	Ø 350	4-Ø19	5	687	Ø 360	259	180	162	187	Ø48	110	14	42.5	M16*36
180-L	Ø 300	Ø 250	Ø 350	4-Ø19	5	725	Ø 360	259	180	162	187	Ø48	110	14	42.5	M16*36
200-L	Ø 350	Ø 300	Ø 400	4-Ø19	5	768	Ø 399	297	192	186	233	Ø55	110	16	49	M20*42

B14 - Face Mounted Dimensions

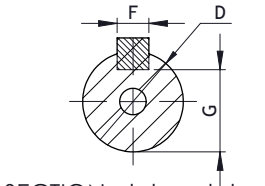




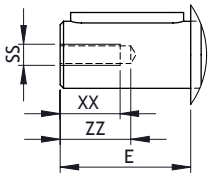


Frame Size	B14					Overall Dimensions						Shaft				
	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
80	Ø 100	Ø 80	Ø 118	M6	3	280	Ø 158	140	16	97	97	Ø19	40	6	15.5	M6*16
90-S	Ø 115	Ø 95	Ø 138	M8	3	325	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
90-L	Ø 115	Ø 95	Ø 138	M8	3	350	Ø 176	150	16	97	97	Ø24	50	8	20	M8*19
100	Ø 130	Ø 110	Ø 158	M8	3.5	388	Ø 199	165	20	118	118	Ø28	60	8	24	M10*22
112	Ø 130	Ø 110	Ø 158	M8	3.5	405	Ø 220	179	29	118	118	Ø28	60	8	24	M10*22
132-S	Ø 165	Ø 130	Ø 198	M10	3.5	467	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	Ø 165	Ø 130	Ø 198	M10	3.5	505	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28

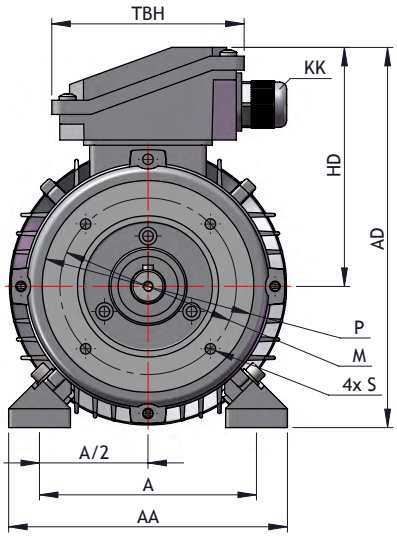
B34 - Face & Feet Mounted Dimensions

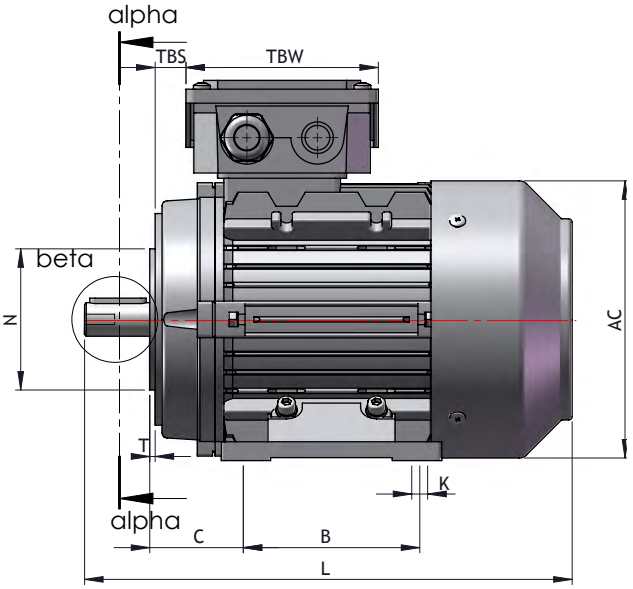


SECTION alpha-alpha
SCALE 1 : 1



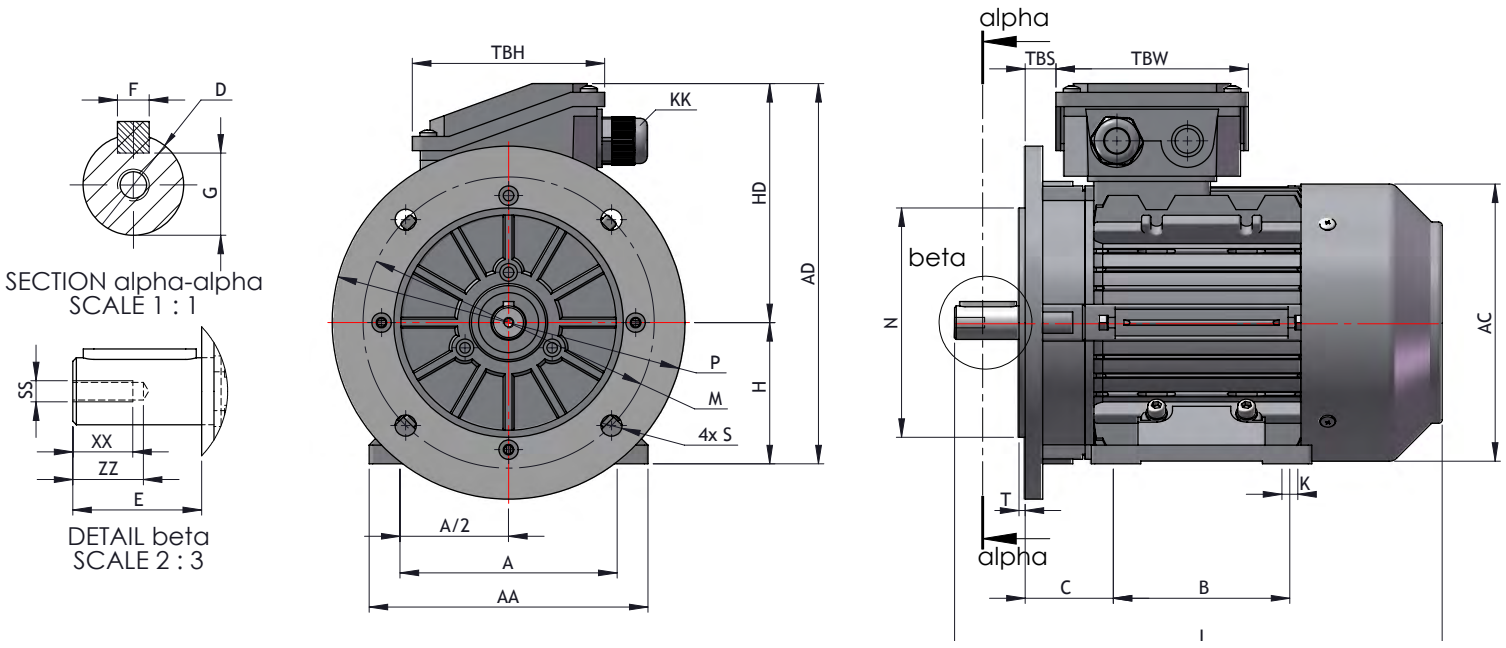
DETAIL beta
SCALE 2 : 3





Frame Size	B34												Overall Dimensions						Shaft				
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS
80	125	100	50	80	Ø9	160	220	Ø100	Ø80	Ø118	M6	3	280	Ø158	140	16	97	97	Ø19	40	6	15.5	M6
90-S	140	100	56	90	Ø10	175	240	Ø115	Ø95	Ø138	M8	3	325	Ø176	150	16	97	97	Ø24	50	8	20	M8
90-L	140	125	56	90	Ø10	175	240	Ø115	Ø95	Ø138	M8	3	350	Ø176	150	16	97	97	Ø24	50	8	20	M8
100	160	140	63	100	Ø12	200	265	Ø130	Ø110	Ø158	M8	3.5	388	Ø199	165	20	118	118	Ø28	60	8	24	M10
112	190	140	70	112	Ø12	230	291	Ø130	Ø110	Ø158	M8	3.5	405	Ø220	179	29	118	118	Ø28	60	8	24	M10
132-S	216	140	89	132	Ø12	255	332	Ø165	Ø130	Ø198	M10	3.5	467	Ø259	200	29	118	118	Ø38	80	10	33	M12
132-M	216	178	89	132	Ø12	255	332	Ø165	Ø130	Ø198	M10	3.5	505	Ø259	200	29	118	118	Ø38	80	10	33	M12

B35 - Large Flange & Feet Mounted Dimensions

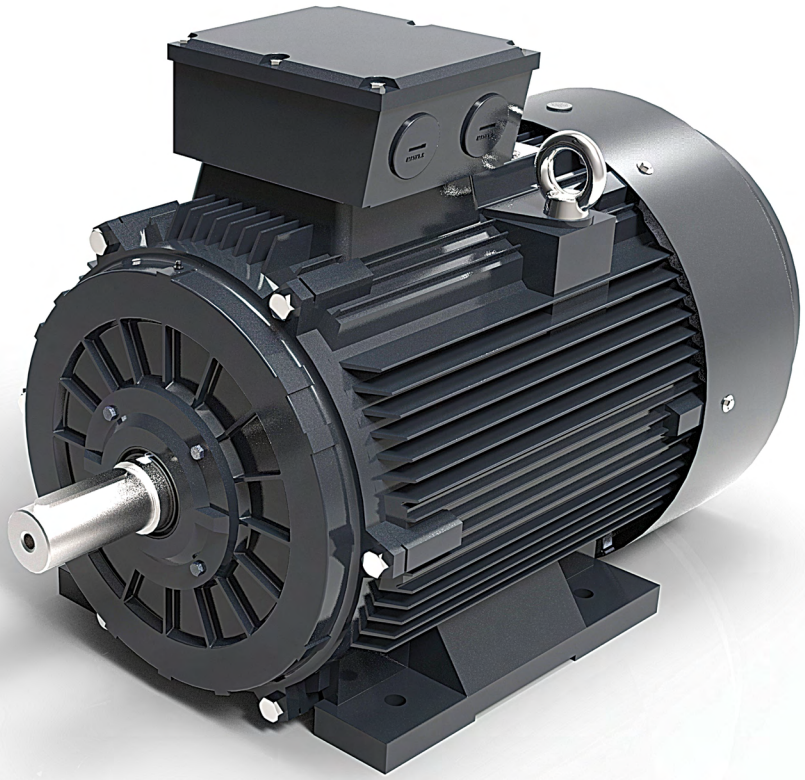


Frame Size	B35												Overall Dimensions						Shaft				
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS
80	125	100	50	80	Ø9	160	220	Ø165	Ø130	Ø198	4-Ø12	3.5	280	Ø158	140	16	97	97	Ø19	40	6	15.5	M6
90-S	140	100	56	90	Ø10	175	240	Ø165	Ø130	Ø198	4-Ø12	3.5	325	Ø176	150	16	97	97	Ø24	50	8	20	M8
90-L	140	125	56	90	Ø10	175	240	Ø165	Ø130	Ø198	4-Ø12	3.5	350	Ø176	150	16	97	97	Ø24	50	8	20	M8
100	160	140	63	100	Ø12	200	265	Ø215	Ø180	Ø250	4-Ø15	4	388	Ø199	165	20	118	118	Ø28	60	8	24	M10
112	190	140	70	112	Ø12	230	291	Ø215	Ø180	Ø250	4-Ø15	4	405	Ø220	179	29	118	118	Ø28	60	8	24	M10
132-S	216	140	89	132	Ø12	255	332	Ø265	Ø230	Ø300	4-Ø15	4	467	Ø259	200	29	118	118	Ø38	80	10	33	M12
132-M	216	178	89	132	Ø12	255	332	Ø265	Ø230	Ø300	4-Ø15	4	505	Ø259	200	29	118	118	Ø38	80	10	33	M12
160-L	254	210	108	160	Ø15	314	402	Ø300	Ø250	Ø350	4-Ø19	5	605	Ø313	242	91	162	187	Ø42	110	12	37	M16
160-M	254	254	108	160	Ø15	314	402	Ø300	Ø250	Ø350	4-Ø19	5	650	Ø313	242	91	162	187	Ø42	110	12	37	M16
180-M	279	241	121	180	Ø15	348	439	Ø300	Ø250	Ø350	4-Ø19	5	687	Ø360	259	160	162	187	Ø48	110	14	42.5	M16
180-L	279	279	121	180	Ø15	348	439	Ø300	Ø250	Ø350	4-Ø19	5	725	Ø360	259	180	162	187	Ø48	110	14	42.5	M16
200L	318	305	133	200	Ø19	388	497	Ø350	Ø300	Ø400	4-Ø19	5	768	Ø399	297	192	186	233	Ø55	110	16	49	M20

C3 SERIES

KEY FEATURES:

- THREE PHASED ENERGY SAVING, HIGH EFFICIENCY, CAST IRON AC MOTORS
- IN IEC STANDARD FRAMES
- IE2 & IE3
- HIGHLY ENERGY EFFICIENT UP TO IE3
- VERY ROBUST, VERY RELIABLE, LONG LIFE SPAN
- QUIET RUNNING, MINIMAL VIBRATION & RESISTANT TO CORROSION
- HIGHLY VERSATILE DESIGN AND ADAPTABLE TO SUIT MANY APPLICATIONS
- MULTI-MOUNT DESIGN GIVES END USERS GREATER FLEXIBILITY



THREE PHASE, CAST IRON HIGH EFFICIENCY MOTORS IN IEC FRAMES 3-315 KW

RANGE OVERVIEW

POWER RANGE:	3 - 315KW
PHASE:	THREE PHASE
EFFICIENCY RATING:	IE2 - HIGH EFFICIENCY & IE3 - PREMIUM EFFICIENCY
FRAME SIZES:	132-355
VOLTAGES:	3KW AND ABOVE: 400/690V 50 HZ
ENCLOSURE:	TEFC (TOTALLY ENCLOSED FAN COOLED)
MOUNTING POSITIONS:	B3, B5, B35
DEGREE OF PROTECTION:	IP55 OTHERS AVAILABLE UPON REQUEST
INSULATION CLASS:	CLASS F WITH CLASS B TEMPERATURE RISE
CERTIFICATION:	CE APPROVED

Cast Iron IE2 2 Pole - 2800 rpm

IEC Three Phase Asynchronous Single Speed Motors

Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos¤)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-2-2-	132-S1	5.5	2905	10.25	87	0.89	18.08	7.8	2.4	2	2.9
C3-2-2-	132-S2	7.5	2910	13.96	88.1	0.88	24.61	7.9	2.7	2	2.8
C3-2-2-	160-M1	11	2920	19.73	89.4	0.9	35.97	7.9	2.2	2.1	3
C3-2-2-	160-M2	15	2918	26.35	90.3	0.91	49.09	7.9	2.3	2.1	3
C3-2-2-	160-L	18.5	2922	31.93	90.9	0.92	60.46	8	2.4	2.1	2.9
C3-2-2-	180-M	22	2930	39.08	91.3	0.89	71.7	7.5	2.3	2	2.8
C3-2-2-	200-L1	30	2925	53.49	92	0.88	97.94	6.7	2.4	2	2.7
C3-2-2-	200-L2	37	2930	64.15	92.5	0.9	120.59	6.3	2.3	2	2.7
C3-2-2-	225-M	45	2930	79.45	92.9	0.88	146.66	6.9	2.3	2	2.8
C3-2-2-	250-M	55	2940	96.8	93.2	0.88	178.64	8	2.3	1.9	2.7
C3-2-2-	280-S	75	2940	125.45	93.8	0.92	243.6	8	2.2	1.9	2.7
C3-2-2-	280-M	90	2940	150.06	94.1	0.92	292.33	7.7	2.2	1.9	2.6
C3-2-2-	315-S	110	2940	187.08	94.3	0.9	357.29	7.7	2	1.8	2.3
C3-2-2-	315-M	132	2940	221.33	94.6	0.91	428.74	7.6	2	1.8	2.3
C3-2-2-	315-L1	160	2945	270.68	94.8	0.9	518.81	7.8	2	1.8	2.3
C3-2-2-	315-L2	200	2945	341.44	95	0.89	648.51	7.9	2	1.8	2.3
C3-2-2-	355-M1	250	2945	422.05	95	0.9	810.64	7.8	2	1.8	2.3
C3-2-2-	355-L	315	2945	537.76	95	0.89	1021.4	7.8	2	1.8	2.3

Cast Iron IE2 4 Pole - 1400 rpm

Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos¤)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-2-4-	132-S	5.5	1430	11.04	87.7	0.82	36.73	7.1	2.3	2	2.8
C3-2-4-	132-M	7.5	1430	14.7	88.7	0.83	50.08	7.8	2.3	2	2.7
C3-2-4-	160-M	11	1440	19.43	89.8	0.91	72.95	7.9	2.5	2.1	2.8
C3-2-4-	160-L	15	1445	25.92	90.8	0.92	99.13	7.8	2.4	2.1	2.9
C3-2-4-	180-M	18.5	1445	33.66	91.2	0.87	122.26	7.8	2.4	2.1	3
C3-2-4-	180-L	22	1460	38.95	91.6	0.89	143.89	7.5	2.3	2	3
C3-2-4-	200-L	30	1460	53.31	92.3	0.88	196.22	7.9	2.4	2	2.7
C3-2-4-	225-S	37	1470	72.02	92.7	0.8	240.36	6.7	2.4	2	2.7
C3-2-4-	225-M	45	1480	87.21	93.1	0.8	290.35	7	2.3	2	2.8
C3-2-4-	250-M	55	1480	96.49	93.5	0.88	354.87	7.4	2.4	1.9	2.7
C3-2-4-	280-S	75	1480	126.56	94	0.91	483.92	7.5	2.2	1.9	2.6
C3-2-4-	280-M	90	1480	149.9	94.2	0.92	580.7	7.7	2.2	1.9	2.6
C3-2-4-	315-S	110	1480	186.69	94.5	0.9	709.75	7.8	2	1.8	2.3
C3-2-4-	315-M	132	1480	221.09	94.7	0.91	851.69	7.8	2	1.8	2.3
C3-2-4-	315-L1	160	1480	267.43	94.9	0.91	1032.36	7.9	2	1.8	2.3
C3-2-4-	315-L2	200	1480	337.29	95.1	0.9	1290.45	7.7	2	1.8	2.3
C3-2-4-	355-M	250	1480	426.35	95.1	0.89	1613.06	7.9	2	1.8	2.3
C3-2-4-	355-L	315	1480	531.23	95.1	0.9	2032.45	7.8	2	1.8	2.3

Cast Iron IE2 6 Pole - 900 rpm

IEC Three Phase Asynchronous Single Speed Motors

Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-2-6-	132-S1	3	940	6.26	83.3	0.83	30.48	6.4	2.4	2.2	2.8
C3-2-6-	132-M1	4	945	8.12	84.6	0.84	40.42	6.2	2.5	2	2.8
C3-2-6-	132-M2	5.5	945	11.26	86	0.82	55.58	6.7	2.3	1.9	2.8
C3-2-6-	160-M1	7.5	955	14.78	87.2	0.84	74.99	7	2.4	1.9	2.7
C3-2-6-	160-L	11	960	21.06	88.7	0.85	109.42	7.3	2.5	2	2.8
C3-2-6-	180-L	15	960	29.08	89.7	0.83	149.21	7.8	2.3	2.1	2.9
C3-2-6-	200-L1	18.5	965	34.75	90.4	0.85	183.07	7.8	2.4	2.1	3.2
C3-2-6-	200-L2	22	965	40.62	90.9	0.86	217.7	7.9	2.3	1.9	3.1
C3-2-6-	225-M	30	975	55.56	91.7	0.85	293.82	7.9	2.2	1.9	2.7
C3-2-6-	250-M	37	975	69.79	92.2	0.83	362.38	7.5	2.3	2.1	2.7
C3-2-6-	280-S	45	980	81.48	92.7	0.86	438.49	7.2	2.3	2	2.8
C3-2-6-	280-M1	55	980	99.15	93.1	0.86	535.93	7.7	2.2	1.9	2.7
C3-2-6-	315-S	75	980	129.81	93.7	0.89	730.81	7.9	2.1	1.9	2.5
C3-2-6-	315-M	90	980	153.56	94	0.9	876.98	7.9	2	1.8	2.3
C3-2-6-	315-L1	110	980	187.08	94.3	0.9	1071.86	7.7	2	1.8	2.3
C3-2-6-	315-L2	132	980	226.3	94.6	0.89	1286.23	7.8	2	1.8	2.3
C3-2-6-	355-M1	160	980	267.71	94.8	0.91	1559.07	7.8	2	1.8	2.3
C3-2-6-	355-M2	200	980	337.64	95	0.9	1948.84	7.8	2	1.8	2.3
C3-2-6-	355-L	250	980	426.79	95	0.89	2436.05	7.8	2	1.8	2.3

Cast Iron IE3 2 Pole - 2800 rpm

IEC Three Phase Asynchronous Single Speed Motors

Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos¤)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-3-2-	132-S1	5.5	2905	10	89.2	0.89	18.08	7.8	2.4	2	2.9
C3-3-2-	132-S2	7.5	2910	13.65	90.1	0.88	24.61	7.9	2.7	2	2.8
C3-3-2-	160-M1	11	2920	19.34	91.2	0.9	35.97	7.9	2.2	2.1	3
C3-3-2-	160-M2	15	2918	25.89	91.9	0.91	49.09	7.9	2.3	2.1	3
C3-3-2-	160-L	18.5	2922	31.41	92.4	0.92	60.46	8	2.4	2.1	2.9
C3-3-2-	180-M	22	2930	38.49	92.7	0.89	71.7	7.5	2.3	2	2.8
C3-3-2-	200-L1	30	2925	52.74	93.3	0.88	97.94	6.7	2.4	2	2.7
C3-3-2-	200-L2	37	2930	63.33	93.7	0.9	120.59	6.3	2.3	2	2.7
C3-3-2-	225-M	45	2930	78.52	94	0.88	146.66	6.9	2.3	2	2.8
C3-3-2-	250-M	55	2940	95.67	94.3	0.88	178.64	8	2.3	1.9	2.7
C3-3-2-	280-S	75	2940	124.26	94.7	0.92	243.6	8	2.2	1.9	2.7
C3-3-2-	280-M	90	2940	148.64	95	0.92	292.33	7.7	2.2	1.9	2.6
C3-3-2-	315-S	110	2940	185.31	95.2	0.9	357.29	7.7	2	1.8	2.3
C3-3-2-	315-M	132	2940	219.47	95.4	0.91	428.74	7.6	2	1.8	2.3
C3-3-2-	315-L1	160	2945	267.86	95.8	0.9	518.81	7.8	2	1.8	2.3
C3-3-2-	315-L2	200	2945	338.58	95.8	0.89	648.51	7.9	2	1.8	2.3
C3-3-2-	355-M1	250	2945	418.53	95.8	0.9	810.64	7.8	2	1.8	2.3
C3-3-2-	355-L	315	2945	533.27	95.8	0.89	1021.4	7.8	2	1.8	2.3

Cast Iron IE3 4 Pole - 1400 rpm

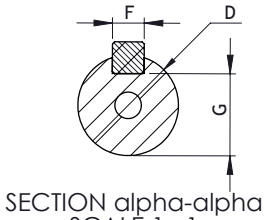
Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos¤)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-3-4-	132-S	5.5	1430	10.81	89.6	0.82	36.73	7.1	2.3	2	2.8
C3-3-4-	132-M	7.5	1430	14.43	90.4	0.83	50.08	7.8	2.3	2	2.7
C3-3-4-	160-M	11	1440	19.09	91.4	0.91	72.95	7.9	2.5	2.1	2.8
C3-3-4-	160-L	15	1445	25.55	92.1	0.92	99.13	7.8	2.4	2.1	2.9
C3-3-4-	180-M	18.5	1445	33.15	92.6	0.87	122.26	7.8	2.4	2.1	3
C3-3-4-	180-L	22	1460	38.37	93	0.89	143.89	7.5	2.3	2	3
C3-3-4-	200-L	30	1460	52.57	93.6	0.88	196.22	7.9	2.4	2	2.7
C3-3-4-	225-S	37	1470	71.09	93.9	0.8	240.36	6.7	2.4	2	2.7
C3-3-4-	225-M	45	1480	86.19	94.2	0.8	290.35	7	2.3	2	2.8
C3-3-4-	250-M	55	1480	95.36	94.6	0.88	354.87	7.4	2.4	1.9	2.7
C3-3-4-	280-S	75	1480	125.22	95	0.91	483.92	7.5	2.2	1.9	2.6
C3-3-4-	280-M	90	1480	148.32	95.2	0.92	580.7	7.7	2.2	1.9	2.6
C3-3-4-	315-S	110	1480	184.92	95.4	0.9	709.75	7.8	2	1.8	2.3
C3-3-4-	315-M	132	1480	219.01	95.6	0.91	851.69	7.8	2	1.8	2.3
C3-3-4-	315-L1	160	1480	264.91	95.8	0.91	1032.36	7.9	2	1.8	2.3
C3-3-4-	315-L2	200	1480	334.12	96	0.9	1290.45	7.7	2	1.8	2.3
C3-3-4-	355-M	250	1480	422.35	96	0.89	1613.06	7.9	2	1.8	2.3
C3-3-4-	355-L	315	1480	526.25	96	0.9	2032.45	7.8	2	1.8	2.3

Cast Iron IE3 6 Pole - 900 rpm

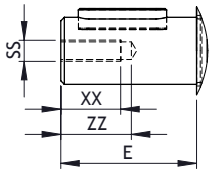
IEC Three Phase Asynchronous Single Speed Motors

Model	Frame	Power (Kw)	rpm (rpm/min)	Current in (A) 400v	Eff. (%)	Power Factor (Cos□)	Torque Cn (Nm)	Is/In	Cs/Cn	Cmin/Cn	Cmax/ Cn
C3-3-6-	132-S1	3	940	6.09	85.6	0.83	30.48	6.3	2.4	2.2	2.8
C3-3-6-	132-M1	4	945	7.92	86.8	0.84	40.42	6.2	2.5	2	2.8
C3-3-6-	132-M2	5.5	945	11	88	0.82	55.58	6.8	2.3	1.9	2.8
C3-3-6-	160-M1	7.5	955	14.46	89.1	0.84	74.99	7	2.4	1.9	2.7
C3-3-6-	160-L	11	960	20.69	90.3	0.85	109.42	7.3	2.5	2	2.8
C3-3-6-	180-L	15	960	28.6	91.2	0.83	149.21	7.8	2.3	2.1	2.9
C3-3-6-	200-L1	18.5	965	34.26	91.7	0.85	183.07	7.8	2.4	2.1	3.2
C3-3-6-	200-L2	22	965	40.05	92.2	0.86	217.7	7.9	2.3	1.9	3.1
C3-3-6-	225-M	30	975	54.84	92.9	0.85	293.82	7.9	2.2	19	2.7
C3-3-6-	250-M	37	975	68.97	93.3	0.83	362.38	7.5	2.3	2.1	2.7
C3-3-6-	280-S	45	980	80.61	93.7	0.86	438.49	7.2	2.3	2	2.8
C3-3-6-	280-M1	55	980	98.1	94.1	0.86	535.93	7.7	2.2	1.9	2.7
C3-3-6-	315-S	75	980	128.58	94.6	0.89	730.81	7.9	2.1	1.9	2.5
C3-3-6-	315-M	90	980	152.1	94.9	0.9	876.98	8	2	1.8	2.3
C3-3-6-	315-L1	110	980	185.51	95.1	0.9	1071.86	7.7	2	1.8	2.3
C3-3-6-	315-L2	132	980	224.4	95.4	0.89	1286.23	8	2	1.8	2.3
C3-3-6-	355-M1	160	980	265.47	95.6	0.91	1559.07	7.6	2	1.8	2.3
C3-3-6-	355-M2	200	980	334.82	95.8	0.9	1948.84	7.8	2	1.8	2.3
C3-3-6-	355-L	250	980	423.23	95.8	0.89	2436.05	7.8	2	1.8	2.3

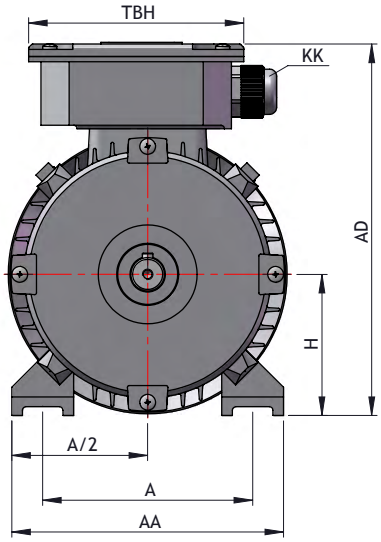
B3 - Foot Mounted Dimensions

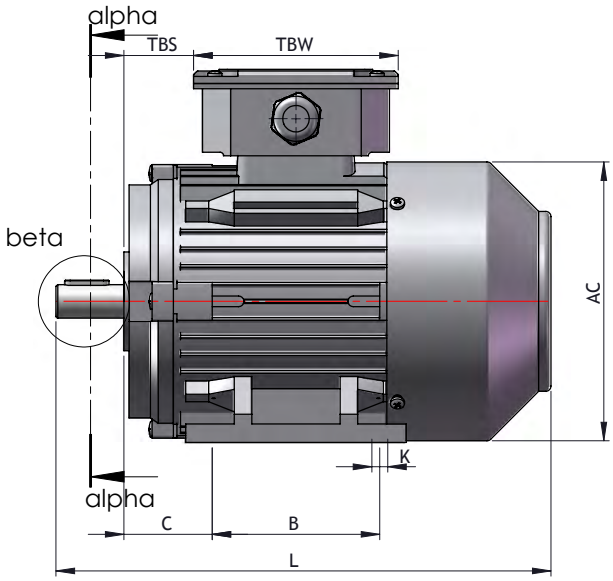


SECTION alpha-alpha
SCALE 1 : 1



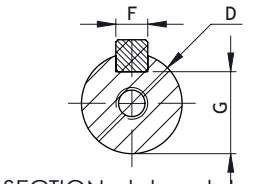
DETAIL beta
SCALE 2 : 3



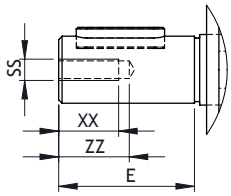


Frame	Pole	B3							Overall Dimensions						Shaft				
		H	A	B	C	AA	AD	K	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
132-S	All	132	216	140	89	255	332	Ø12	467	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	All	132	216	178	89	255	332	Ø12	505	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
160-M	All	160	254	210	108	314	402	Ø15	605	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
160-L	All	160	254	254	108	314	402	Ø15	650	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
180-M	All	180	279	241	121	348	439	Ø15	687	Ø 360	259	160	162	187	Ø48	110	14	42.5	M16*36
180-L	All	180	279	279	121	348	439	Ø15	725	Ø 360	259	180	162	187	Ø48	110	14	42.5	M16*36
200-L	All	200	318	305	133	388	497	Ø19	768	Ø 399	297	192	186	233	Ø55	110	16	49	M20*42
225-S	4,8	225	356	286	149	436	553	Ø19	814	Ø 465	328	190	186	233	Ø60	140	18	53	M20*42
225-M	2	225	356	311	149	436	553	Ø19	809	Ø 465	328	202	186	233	Ø55	110	16	49	M20*42
	4,6,8	225	356	311	149	436	553	Ø19	839	Ø 465	328	202	186	233	Ø60	140	18	53	M20*42
250-M	2	250	406	349	168	484	616	Ø24	918	Ø 506	366	233	218	260	Ø60	140	18	53	M20*42
	4,6,8	250	406	349	168	484	616	Ø24	918	Ø 506	366	233	218	260	Ø65	140	18	58	M20*42
280-S	2	280	457	368	190	557	668	Ø24	984	Ø 559	388	265	218	260	Ø65	140	18	58	M20*42
	4,6,8	280	457	368	190	557	668	Ø24	984	Ø 559	388	265	218	260	Ø75	140	20	67.5	M20*42
280-M	2	280	457	419	190	557	668	Ø24	1035	Ø 559	388	265	218	260	Ø65	140	18	58	M20*42
	4,6,8	280	457	419	190	557	668	Ø24	1035	Ø 559	388	265	218	260	Ø75	140	20	67.5	M20*42
315-S	2	315	508	406	216	630	845	Ø28	1205	Ø 680	530	130	280	320	Ø65	140	18	58	M20*42
	4,6,8	315	508	406	216	630	845	Ø28	1235	Ø 680	530	130	280	320	Ø80	170	22	71	M20*42
315-M	2	315	508	457	216	630	845	Ø28	1255	Ø 680	530	130	280	320	Ø65	140	18	58	M20*42
	4,6,8	315	508	457	216	630	845	Ø28	1385	Ø 680	530	130	280	320	Ø80	170	22	71	M20*42
315-L	2	315	508	508	216	630	845	Ø28	1255	Ø 680	530	130	280	320	Ø65	140	18	58	M20*42
	4,6,8	315	508	508	216	630	845	Ø28	1385	Ø 680	530	130	280	320	Ø80	170	22	71	M20*42
355-M	2	355	610	560	254	740	1010	Ø28	1500	Ø 820	655	130	330	380	Ø75	140	20	67.5	M20*42
	4,6,8	355	610	560	254	740	1010	Ø28	1570	Ø 820	655	140	330	380	Ø100	210	28	90	M20*42
355-L	2	355	610	630	254	740	1010	Ø28	1500	Ø 820	655	HO	330	380	Ø75	140	20	67.5	M20*42
	4,6,8	355	610	630	254	740	1010	Ø28	1570	Ø 820	655	140	330	380	Ø100	210	28	90	M20*42

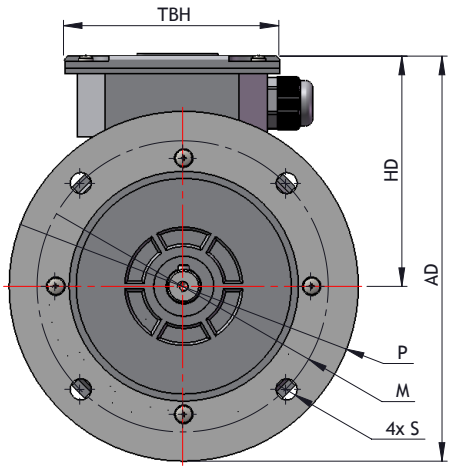
B5 - Large Flange Mounted Dimensions

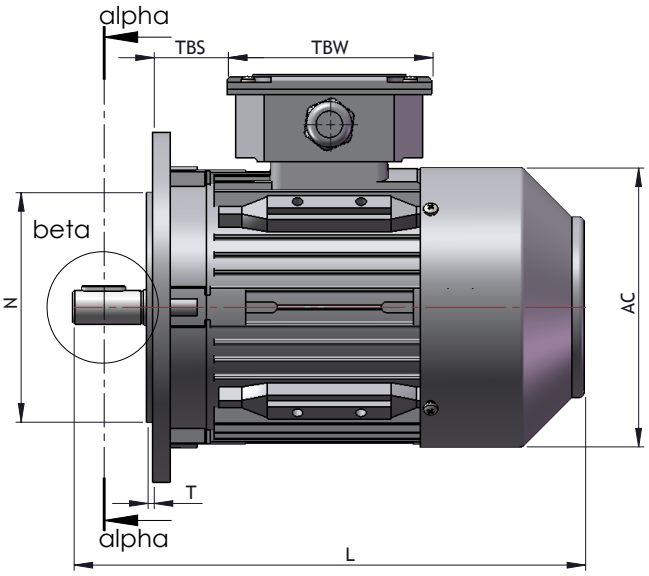


SECTION alpha-alpha
SCALE 1 : 1



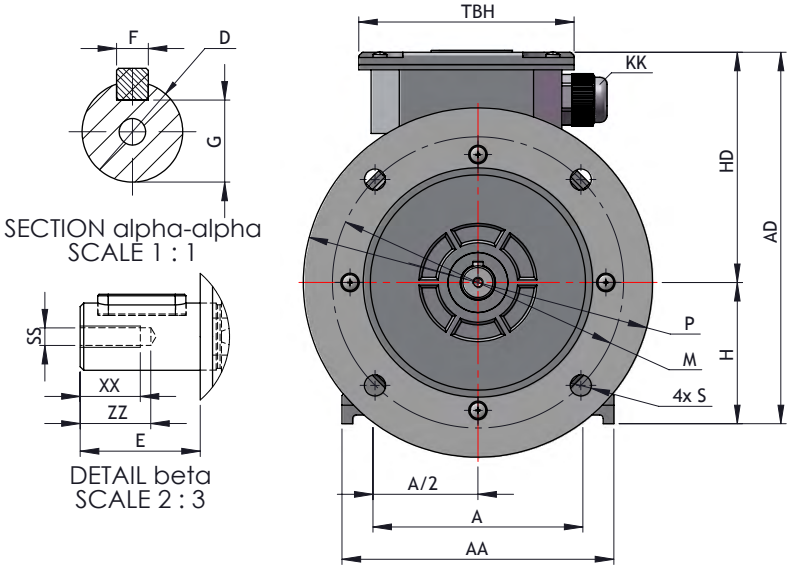
DETAIL beta
SCALE 2 : 3

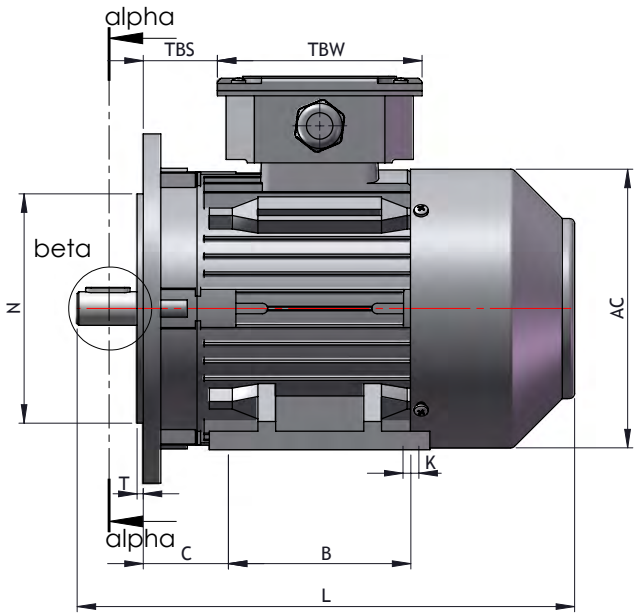




Frame	Pole	B5					Overall Dimensions						Shaft				
		M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
132-S	All	Ø 265	Ø 230	Ø 300	4-Ø15	4	467	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	All	Ø 265	Ø 230	Ø 300	4-Ø15	4	505	Ø 259	200	29	118	118	Ø38	80	10	33	M12*28
160-M	All	Ø 300	Ø 250	Ø 350	4-Ø19	5	605	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
160-L	All	Ø 300	Ø 250	Ø 350	4-Ø19	5	650	Ø 313	242	91	162	187	Ø42	110	12	37	M16*36
180-M	All	Ø 300	Ø 250	Ø 350	4-Ø19	5	687	Ø 360	259	160	162	187	Ø48	110	14	42.5	M16*36
180-L	All	Ø 300	Ø 250	Ø 350	4-Ø19	5	725	Ø 360	259	180	162	187	Ø48	110	14	42.5	M16*36
200-L	All	Ø 350	Ø 300	Ø 400	4-Ø19	5	768	Ø 399	297	192	186	233	Ø55	110	16	49	M20*42
225-S	4,8	Ø 400	Ø 350	Ø 450	8-Ø19	5	814	Ø 465	328	190	186	233	Ø60	140	18	53	M20*42
225-M	2	Ø 400	Ø 350	Ø 450	8-Ø19	5	809	Ø 465	328	202	186	233	Ø55	110	16	49	M20*42
	4,6,8	Ø 400	Ø 350	Ø 450	8-Ø19	5	839	Ø 465	328	202	186	233	Ø60	140	18	53	M20*42
250-M	2	Ø 500	Ø 450	Ø 550	8-Ø19	5	918	Ø 506	366	233	218	260	Ø60	140	18	53	M20*42
	4,6,8	Ø 500	Ø 450	Ø 550	8-Ø19	5	918	Ø 506	366	233	218	260	Ø65	140	18	58	M20*42
280-S	2	Ø 500	Ø 450	Ø 550	8-Ø19	5	984	Ø 559	388	265	218	260	Ø65	140	18	58	M20*42
	4,6,8	Ø 500	Ø 450	Ø 550	8-Ø19	5	984	Ø 559	388	265	218	260	Ø75	140	20	67.5	M20*42
280-M	2	Ø 500	Ø 450	Ø 550	8-Ø19	5	1035	Ø 559	388	265	218	260	Ø65	140	18	58	M20*42
	4,6,8	Ø 500	Ø 450	Ø 550	8-Ø19	5	1035	Ø 559	388	265	218	260	Ø75	140	20	67.5	M20*42
315-S	2	Ø 600	Ø 550	Ø 660	8-Ø24	6	1205	Ø 680	530	130	280	320	Ø65	140	18	58	M20*42
	4,6,8	Ø 600	Ø 550	Ø 660	8-Ø24	6	1235	Ø 680	530	130	280	320	Ø80	170	22	71	M20*42
315-M/L	2	Ø 600	Ø 550	Ø 660	8-Ø24	6	1255	Ø 680	530	130	280	320	Ø65	140	18	58	M20*42
	4,6,8	Ø 600	Ø 550	Ø 660	8-Ø24	6	1385	Ø 680	530	130	280	320	Ø80	170	22	71	M20*42
355-M/L	2	Ø 740	Ø 680	Ø 800	8-Ø24	6	1500	Ø 820	655	HO	330	380	Ø75	140	20	67.5	M20*42
	4,6,8	Ø 740	Ø 680	Ø 800	8-Ø24	6	1570	Ø 820	655	140	330	380	Ø100	210	28	90	M20*42

B35 - Large Flange & Feet Mounted Dimensions





Frame Size	B35												Overall Dimensions						Shaft				
	A	B	C	H	K	AA	AD	M	N	P	S	T	L	AC	HD	TBS	TBW	TBH	D	E	F	G	SS/XX
80	125	100	50	80	Ø9	160	220	Ø165	Ø130	Ø198	4-Ø12	3.5	280	Ø158	140	16	97	97	Ø19	40	6	15.5	M6*16
90-S	140	100	56	90	Ø10	175	240	Ø165	Ø130	Ø198	4-Ø12	3.5	325	Ø176	150	16	97	97	Ø24	50	8	20	M8*19
90-L	140	125	56	90	Ø10	175	240	Ø165	Ø130	Ø198	4-Ø12	3.5	350	Ø176	150	16	97	97	Ø24	50	8	20	M8*19
100	160	140	63	100	Ø12	200	265	Ø215	Ø180	Ø250	4-Ø15	4	388	Ø199	165	20	118	118	Ø28	60	8	24	M10*22
112	190	140	70	112	Ø12	230	291	Ø215	Ø180	Ø250	4-Ø15	4	405	Ø220	179	29	118	118	Ø28	60	8	24	M10*22
132-S	216	140	89	132	Ø12	255	332	Ø265	Ø230	Ø300	4-Ø15	4	467	Ø259	200	29	118	118	Ø38	80	10	33	M12*28
132-M	216	178	89	132	Ø12	255	332	Ø265	Ø230	Ø300	4-Ø15	4	505	Ø259	200	29	118	118	Ø38	80	10	33	M12*28
160-L	254	210	108	160	Ø15	314	402	Ø300	Ø250	Ø350	4-Ø19	5	605	Ø313	242	91	162	187	Ø42	110	12	37	M16*36
160-M	254	254	108	160	Ø15	314	402	Ø300	Ø250	Ø350	4-Ø19	5	650	Ø313	242	91	162	187	Ø42	110	12	37	M16*36
180-M	279	241	121	180	Ø15	348	439	Ø300	Ø250	Ø350	4-Ø19	5	687	Ø360	259	160	162	187	Ø48	110	14	42.5	M16*36
180-L	279	279	121	180	Ø15	348	439	Ø300	Ø250	Ø350	4-Ø19	5	725	Ø360	259	180	162	187	Ø48	110	14	42.5	M16*36
200L	318	305	133	200	Ø19	388	497	Ø350	Ø300	Ø400	4-Ø19	5	768	Ø399	297	192	186	233	Ø55	110	16	49	M20*42

Standards and Standardisations

All Parvalux motors are manufactured in line with the new European standard IEC 60034-30 for high efficiency.

Ratings and Performances
IEC 60034-1 CEI EN 60034-1

Method for determining losses and efficiency
IEC 60034-2 CEI EN 60034-2

Rotating electrical machines, Part 30, efficiency classes of single speed, three phase induction motors (IE code)
IEC 60034-30 edition 1

Classification of degrees of protection (ip code)
IEC 60034-5 CEI EN 60034-5

Methods of cooling (IC code)
IEC 60034-6 CEI EN 60034-6

Classification of type of construction mountain arrangements (IM code)
IEC 60034-7 CEI EN 60034-7

Terminal markings and direction of rotation
IEC 60034-8 CEI 2-8

Noise limits
IEC 60034-9 CEI EN 60034-9

Built-in thermal protection
IEC 60034-11

Starting performance of rotating electrical machines
IEC 60034-12 CEI EN 60034-12

Mechanical vibrations
IEC 60034-14 CEI EN 60034-14

Dimensions and outputs for electrical machines
CEI EN50347 IEC 60072-1 IEC 60072-2

Coupling dimensions are the compliance with the following standardisations:
Unel 1311-71 for the B3 mounting and for other frame types
Unel 1311-71 for the B5 mounting and for other frame types

The UNEL standardisations are in accordance with the IEC international standards publication 72 and relative Amendment Nr. 1.

Efficiency Standards

All Parvalux motors are manufactured in line with the new European standard for high efficiency (as summarised on page 23).

IEC 60034-30 standard defines three IE efficiency classes (IE1 - standard efficiency, IE2 - high efficiency & IE3 - premium efficiency) for single speed three phase cage induction motors; 50Hz and 60Hz; 2,4,6 pole, rated voltage up to 1000V, duty type S1-S8 with a rated cyclic duration factor of 80% or higher operating direct on line.

Series A3, A3H and C3 all comply to IEC 60034-30. The SD series, A1PC, A1DC, A3B series have no legislation and as such do not need to comply to this standard.

From 01.01.2015 IE3 is obligatory in Europe from 7.5-375kW. IE2 motors between 0.75 up to 7.5kW must be used.
From 01.01.2017 IE3 motors are obligatory from 0.75-375kW.
Exclusions are summarised on page 23.

General Construction Features

The motors have been designed and manufactured in compliance with international standards.

The A3 Series and A3H Series are aluminium designs. The fan cowl is made from steel sheets. Flanges and end-shields are aluminium.

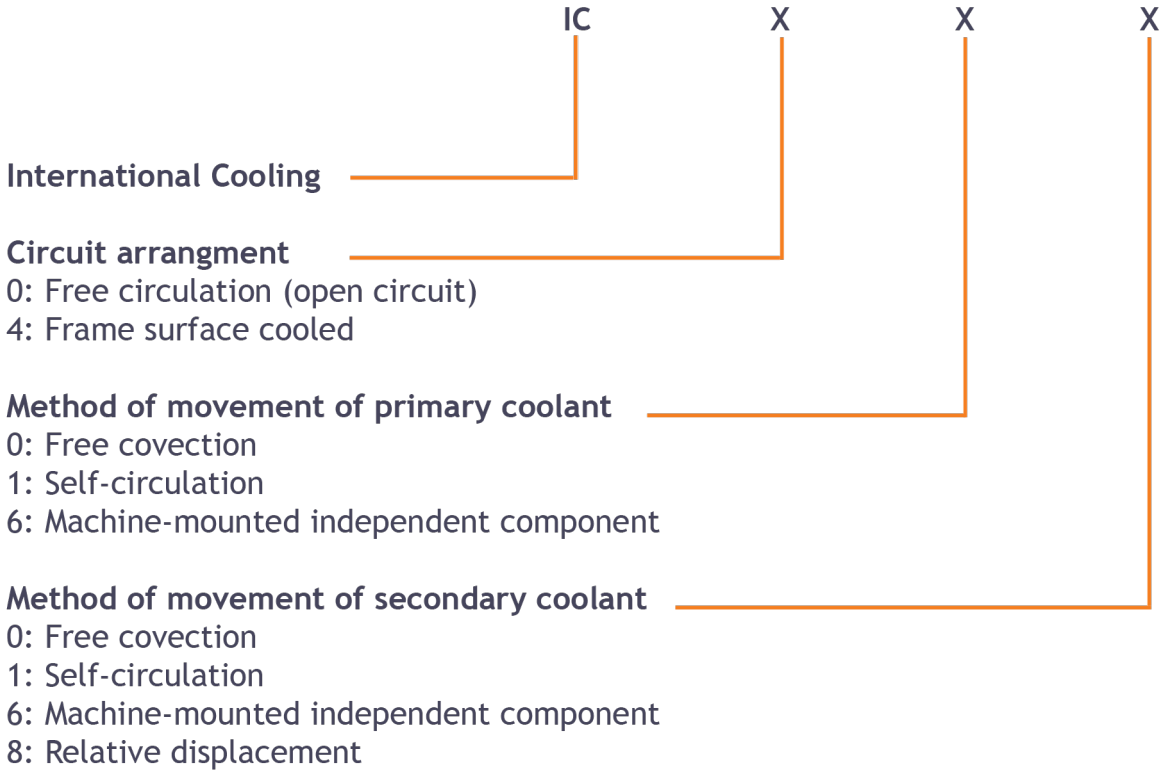
The C3 Series is a cast iron design. The fan cowl is made from steel sheet. Flanges and end-shields are cast iron.

Terminal boxes as standard are on top of the motor, they can be rotated in step of 90˚. The end user can modify the terminal box to be on the left or the right side in frame size 56 to frame size 280.

Fans are in nylon, upon request can be supplied with fans in aluminium or steel. Feet are detachable on all series, from frame size 56 to frame size 280.

Cooling

The designation of the cooling method is given by the IC (International Cooling) code, according to IEC 60034-6



IC Code Summary:

IC 410: Totally enclosed motor without fan
IC 411: Totally enclosed standard motor, frame surface cooled with fan
IC 416: Totally enclosed motor with auxiliary fan motor
IC 418: Totally enclosed motor, frame surface cooled without fan

Parvalux can deliver motors as below:

Motors as standard from 56 to 355 are supplied with IC 411 cooling systems, incorporating a bi-directional fan.

All frame sizes can be supplied with cooling systems IC 410, IC 416 & IC 418 upon request.

In the case if an IC 416 is requested an additional fan is fitted inside the fan cover, suitably reinforced, in order to make a ventilation independent of the motors rotational speed.

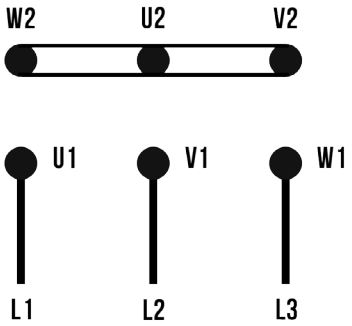
Connection

Motors 4.0kw and above are usually delta connected (Δ) (400v) to allow star-delta starting (Y/Δ). Motors 3.0kw and bellow are usually star connected (Y) (400v) which gives the option of a 230/3/50 supply (Δ) for 1ph-3ph frequency drive connection.

Upon request and for particular applications, based on the powers and supply voltages, motors can be star connected (Y). Wiring diagrams are shown in the operation and maintenance manual and attached to each motor.

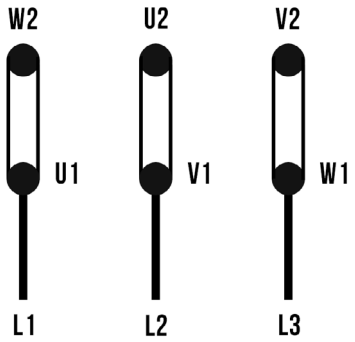
A3 Three Phase Motors

Star Connection



A3 Three Phase Motors

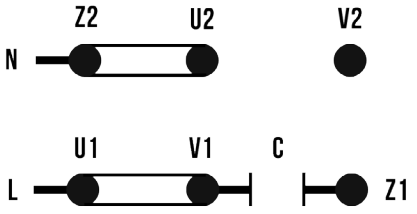
Delta Connection



A1PC Single Phase Motors

Permanent Capacitor

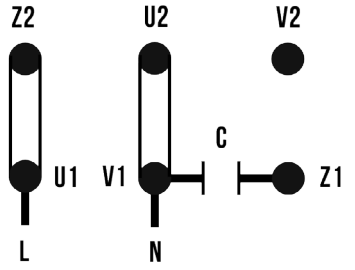
Clockwise Rotation



A1PC Single Phase Motors

Permanent Capacitor

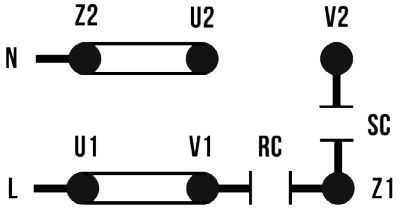
Anti Clockwise Rotation



A1CSR Single Phase Motors

Cap Start/Cap Run

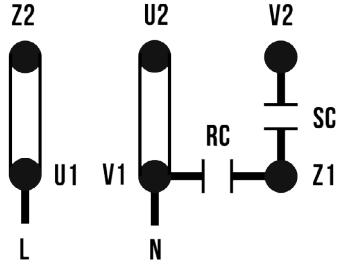
Clockwise Rotation



A1CSR Single Phase Motors

Cap Start/Cap Run

Anti Clockwise Rotation



Insulation

All Parvalux motors are manufactured as standard with Class F insulation with B temperature rise.

Class F insulation system
- Max ambient temperature 40˚C
- Max permissible temperature rise 105 K
- Hotspot temperature margin + 10 K

Class B Rise
- Max ambient temperature 40˚C
- Max permissible temperature rise 80 K
- Hotspot temperature margin + 10 K

Insulation system temperature class
- Class F 155˚C
- Class B 130˚C
- Class H 180˚C

Duty Ratings & Technical Data

All technical data reported in the tables are referred to continuous duty (S1). Upon request, motors are limited Duty S2 (30 or 60 minutes) can be supplied.

Power and data reported in the Technical Data Tables are based on continuous duty (S1) at an ambient temperature of 40 C, max. altitude 1000 a.s.l., with supply at 400 V – 50Hz.
In such conditions, the temperatures rise reached by the motors is lower than the one provided for by the H insulation class.
The operation characteristics are guaranteed with the tolerances defined by the CEI EN 60034-1 Standards and the IEC 60034-1
Recommendations, reported in the table below:

Characteristics	Tolerances
Efficiency	Motor power <50 kW -15% di (1 - n) Motor power > 50 kW -10% di (1 - n)
Power Factor	+1/6 (1-cosϕ) Min 0.02 Max 0.07
Locked rotor current	+20% of guaranteed value
Locked rotor torque	-15% + 25% of guaranteed value
Pull out torque	-10% of guaranteed value
Slip	20% of guaranteed value

Voltage & Frequency Variations

Motors will work as expected if the supply voltage variations are limited as stated in the Classification Society Standards.
In particular, motors can run with voltage variations of 10% and frequency variations of 5% with a maximum combined variation of 10% and within the temperature rise as stated by the provisions of the Classification Society Standards.

Operation at 60HZ Frequency

The motor will run with a frequency of 60Hz with the difference in performance and electrical power applying the multiplier coefficient as detailed below. Motors made at 50Hz but supplied with 60Hz may have varying output efficiencies compared to the 50Hz values.

PLATE VOLTAGE 50 HZ	PLATE VOLTAGE 60 HZ	NOMINAL POWER	NOMINAL CURRENT	NOMINAL TORQUE	RPM	STARTING CURRENT	STARTING TORQUE	MAX TORQUE
230 +/- 10%	220 +/- 5%	1.00	1.00	0.83	1.2	0.83	0.83	0.83
230 +/- 10%	230 +/- 10%	1.00	0.95	0.83	1.2	0.83	0.83	0.83
230 +/- 10%	254 +/- 5%	1.15	1.2	0.96	1.2	0.93	0.93	0.93
230 +/- 10%	277 +/- 5%	1.2	1.00	1.00	1.2	1.00	1.00	1.00
400 +/- 10%	380 +/- 5%	1.00	1.00	0.83	1.2	0.83	0.83	0.83
400 +/- 10%	400 +/- 10%	1.00	0.95	0.83	1.2	0.83	0.83	0.83
400 +/- 10%	440 +/- 5%	1.15	1.02	0.96	1.2	0.93	0.93	0.93
400 +/- 10%	460 +/- 10%	1.15	1.00	0.96	1.2	0.96	0.96	0.96
400 +/- 10%	480 +/- 5%	1.2	1.00	1.00	1.2	1.00	1.00	1.00

De-rating

The technical data tables refer to an ambient temperature of 40˚C and an altitude up to 1000 a.s.l. In different environment conditions output ratings vary, and are calculated by applying the factors as mentioned in the table below, maintaining the temperature rise provided for by the F insulation class.

ALTITUDE M A.S.L	AMBIENT TEMPERATURE (˚C)					
	30	30-40	45	50	55	60
<=1000	1.06	1	0.97	0.94	0.9	0.87
1500	1.04	0.97	0.94	0.91	0.87	0.84
2000	1	0.95	0.92	0.88	0.84	0.81
3000	0.96	0.89	0.86	0.82	0.78	0.74
4000	0.91	0.84	0.8	0.76	0.72	0.67

Overloads

Continuous duty motors can withstand the following overloads:

OVERLOAD %	DURATION MINUTES	TIME INTEVAL MINUTES
10	10	15
20	6	15
30	4	15
40	3	15
50	2	15

In these operating overloads conditions, over temperatures are then limited to insulation class F.

Starting

Motors are suitable for the following types of starting:

- Direct
- Star – delta (400/690v only)
- By autotransformer
- Soft-start (*)
- By inverter(**)

(*) After starting is complete, the soft start should be by-passed, precautions must also be taken when the motor is powered by an inverter

(**) see recommendation in paragraph n.23 “Inverter supply”

Vibration

Motors are dynamically balanced with a half key applied to the shaft extension in accordance with standard IEC 60034-14 to vibration severity grade reduced (R) in standard execution.
The following table indicates the maximum vibration grades with respect to the different shaft heights.

Vibration Degree	Rated Speed	Frame Size
N (normal)	600-1800	1.8
R (reduced)	600-1800	0.71
	1800-3600	1.12
S (special)	600-1800	0.45
	1800-3600	0.71

Noise

The technical features detailed in the table below contain the values of A-sound pressure level (LpA) and A sound power level (LwA), measured at a one meter distance.
Sound levels are measured in no load conditions and have tolerances of +/- 3 dB(A).

Frame Size	A Sound Pressure (LpA) & Power (LwA) Levels							
	2 poles		4 poles		6 poles		8 poles	
	LpA	LwA	LpA	LwA	LpA	LwA	LpA	LwA
56	69	78	63	72	58	67	54	63
63	75	84	67	76	61	70	58	67
71	75	84	67	76	61	70	58	67
80	75	84	70	79	63	72	61	70
90	75	85	70	80	66	76	66	76
100	77	87	70	80	66	76	66	76
112	78	88	73	83	66	76	66	76
132	69	78	63	72	58	67	54	63
160	75	84	67	76	61	70	58	67
180	75	84	67	76	61	70	58	67
200	75	84	70	79	63	72	61	70
225	75	85	70	80	66	76	66	76
250	77	87	70	80	66	76	66	76
280	78	88	73	83	66	76	66	76
315	80	90	77	87	73	83	69	79
355	86	97	84	96	82	94	79	91

The value of the noise (LpA) and the sound power (LwA) in the table are related to the operation at 50Hz, when the frequency changes these values change detailed in the following table:

SUPPY FREQUENCY HZ	% NOISE LEVEL COMPARED TO THE 50HZ VALUE
10	60%
20	60%
30	70%
40	100%
50	100%
60	100%
80	120%

Thermal Protection

All 3ph Parvalux motors from the frame size 56 to frame size 355 are fitted with positive temperature coefficient thermistors (PTC). These thermal devices, at the designed temperature, quickly change their standard resistance value. These PTC's, upon request, can be installed in 1ph motors

Resistance of PTC, for nominal operating temperature (TK), will satisfy the following values:

-<250 Ohm from temperature from -20˚C to TK-20˚C
-<550 Ohm at a temperature of TK-5˚C
->1330 Ohm at a temperature of TK+5˚C
->4000 Ohm at a temperature of TK+15˚C

In line with the standards, PTC's are designed for resistance value from 1650 Ohm to 4000 Ohm, in our case, installed n. 3 PTC in series, disengaged takes in the temperature range from TK-5˚C to TK-˚C. Values of TK related with the class of insulation are the following:

CLASS OF INSULATION	OPERATING TEMPERATURE LIMIT OF THE INSULATION	TK ˚C
A	105	95-100
E	120	110-115
B	130	120-125
F	155	145-150
H	180	170-175

The nominal operating temperature of the thermistors PTC, mounted on Parvalux motors in 130˚C in the A3 and A3H series. C3 Series motors have 150˚C PTC's fitted. The maximum supply voltage of the PTC thermistors is 2.5V.

Upon request, the following thermal protections can be installed on the motors;

Bimetallic devices
Motor protectors with contact are normally closed. The contact opens when the winding temperatures reaches limits dangerous to the insulation system of the motor.

Platinum resistance thermometers PT100
Variable linear resistance with the winding temperature. The device is especially suitable for continuous winding temperature monitoring.

The protection is normally made by 3 sensitive elements, one for every phase, series connected and with two terminals in a specially provided terminal board located in the main terminal box or in specially provided auxiliary terminal box.

Bearings

All aluminium designs from frame size 56 to frame size 200 have sealed for life pre lubricated ball bearings, DE and NDE side, C3 clearance.

Cast iron designs in frame size up to 132 have sealed for life pre-lubricated ball bearings, DE and NDE side C3. Cast iron designs from frame size 160 to frame size 280 (including 315 2 pole) have open ball bearings, DE and NDE, C3. Cast iron designs from frame size 315(4, 6, 8 pole) to frame size 355, have roller bearings DE side all ball bearings NDE side.

All non-sealed bearings need to be periodically re-lubricated according to the data given in the motors operation and maintenance manual. All motors are fitted with thrust washers in order to minimise vibration. Locked bearing options are available upon request. The lifetime of bearings (in accordance with supplier data) is in excess of 40,000 hours, for motors with direct coupling.

The table below details all specifications concerning bearings installed in motors frame size 56-355.

Motor Type	Poles	MOUNTAIN B3		MOUNTAIN B5/B14	
		Bearing coupling side DE	Bearing opposite coupling side NDE	Bearing coupling side DE	Bearing opposite coupling side NDE
A3/A3H 56	2 4 6 8	6201-2RS-C3	6201-2RS-C3	6201-2RS-C3	6201-2RS-C3
A3/A3H 63	2 4 6 8	6201-2RS-C3	6201-2RS-C3	6201-2RS-C3	6201-2RS-C3
A3/A3H 71	2 4 6 8	6202-2RS-C3	6202-2RS-C3	6202-2RS-C3	6202-2RS-C3
A3/A3H 80	2 4 6 8	6204-2RS-C3	6204-2RS-C3	6204-2RS-C3	6204-2RS-C3
A3/A3H 90	2 4 6 8	6205-2RS-C3	6205-2RS-C3	6205-2RS-C3	6205-2RS-C3
A3/A3H 100	2 4 6 8	6206-2RS-C3	6206-2RS-C3	6206-2RS-C3	6206-2RS-C3
A3/A3H 112	2 4 6 8	6306-2RS-C3	6306-2RS-C3	6306-2RS-C3	6306-2RS-C3
A3/A3H 132	2 4 6 8	6308-2RS-C3	6308-2RS-C3	6308-2RS-C3	6308-2RS-C3
A3/A3H 160	2 4 6 8	6309-2RS-C3	6309-2RS-C3	6309-2RS-C3	6309-2RS-C3
A3/A3H 180	2 4 6 8	6311-2RS-C3	6311-2RS-C3	6311-2RS-C3	6311-2RS-C3
A3/A3H 200	2 4 6 8	6312-2RS-C3	6312-2RS-C3	6312-2RS-C3	6312-2RS-C3
C3 132	2 4 6 8	6308ZZ-C3	6308ZZ-C3	6308ZZ-C3	6308ZZ-C3
C3 160	2 4 6 8	6309-C3	6309-C3	6309-C3	6309-C3
C3 180	2 4 6 8	6311-C3	6311-C3	6311-C3	6311-C3
C3 200	2 4 6 8	6312-C3	6312-C3	6312-C3	6312-C3
C3 225	2 4 6 8	6313-C3	6313-C3	6313-C3	6313-C3
C3 250	2 4 6 8	6314-C3	6314-C3	6314-C3	6314-C3
C3 280	2 4 6 8	6316-C3	6316-C3	6316-C3	6316-C3
C3 315	2	6317-C3	6317-C3	6317-C3	6317-C3
C3 315	4 6 8	NU319	6319-C3	NU319	6319-C3
C3 355	2	6319-C3	6319-C3	6319-C3	6319-C3
C3 355	4 6 8	NU322	6322-C3	NU322	6322-C3

Upon request motors can be modified with roller bearings at DE, where non-standard, insulated bearings at the NDE and angular contact bearings at the DE

Terminal Box

All terminal boxes are IP55 as standard. Terminal boxes as standard are on top of the motor, they can be rotated in step of 90˚. The end user can modify the terminal box to be on the left or the right side in frame size 56 to frame size 280.

The terminal block is normally equipped with 6 terminals and is made of non-hygroscopic and mildew resistance materials. Terminal box for the aluminium designs is made of aluminium and cast iron or tin for C3 design.

Terminal boxes on the aluminium designs from size 56 to size 90 are fitted with a cable-gland and a plug. Size 100 to size 200 are fitted two cable-glands. Terminal boxes on the cast iron C3 design are fitted with two cable-glands, those motors in frame 160 and above are fitted with an additional M16 auxiliary gland. The table below details which gland sizes are fitted in which frame size:

Frame	Cable-Gland
A3/A3H 56	1-M20x1,5
A3/A3H 63	1-M20x1,5
A3/A3H 71	1-M20x1,5
A3/A3H 80	1-M20x1,5
A3/A3H 90	1-M25x1,5
A3/A3H 100	1-M25x1,5
A3/A3H 112	2-M25x1,5
A3/A3H 132	2-M32x1,5
A3/A3H 160	2-M32x1,5
A3/A3H 180	2-M40x1,5
A3/A3H 200	2-M40x1,5
C3 132	2-M25x1,5
C3 160	2-M32x1,5+1M16x1,5
C3 180	2-M32x1,5+1M16x1,5
C3 200	2-M40x1,5+1M16x1,5
C3 225	2-M50x1,5+1M16x1,5
C3 250	2-M50x1,5+1M16x1,5
C3 280	2-M63x1,5+1M16x1,5
C3 315	2-M63x1,5+1M16x1,5
C3 355	2-M63x1,5+1M16x1,5

Anti-Condensation Heaters

Motors that are subject to atmospheric condensation, either through standing idle in damp environments or because of wide ambient temperature variations, may be fitted with anti-condensation heaters. They are of tape form and are normally mounted on the stator winding head.

Anti-condensation heaters are normally switched on automatically when the supply to the motor is interrupted, heating the motor to avoid water condensation.
Normal supply voltage is 110/115V or 220/240V.

Anti-condensation heater terminals are led to a specifically provided terminal board located in the main terminal box. Upon request they can be led to a terminal board located in an auxiliary terminal box.

The power values normally used are shown in the table:

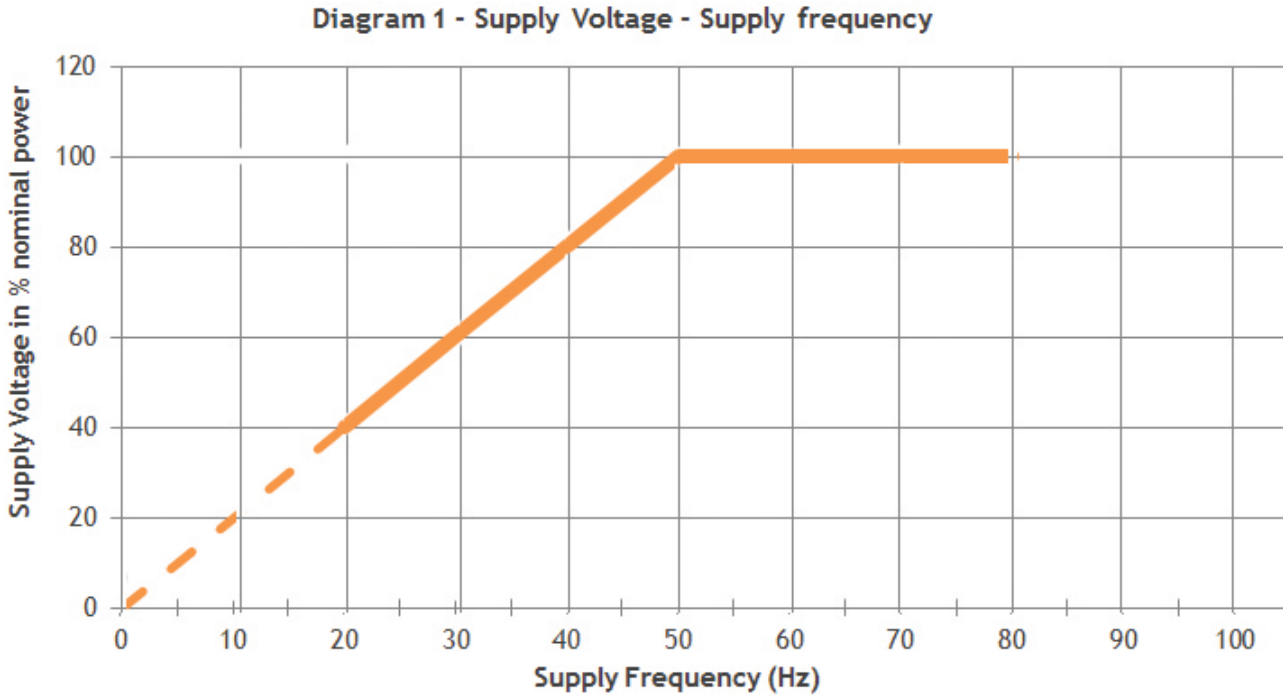
FRAME SIZE	POWER (W)
132-160	26
180-200	26
225-250	50
280-315	100
355	200

Drain Holes

Parvalux motors in 56-355 frames are equipped with drain holes at DE and NDE for the discharge of condensation, closed with a plug to guarantee the IP integrity (ingress protection) stated on the plate.
As a function of the operating condition, such plugs can be removed to allow the discharge of condensation that may form inside the motor. The holes are fitted ready for B3 mounting positions as a standard but can be fitted elsewhere on request.

Inverter Supply

All Parvalux IEC 3ph motors are designed to be used in conjunction with an inverter.
These motors can be driven up to the rated frequency (50Hz) with supply voltage proportional to the frequency. As illustrated in diagram 1 at higher frequencies they can be supplied at constant voltage up to the level of 80Hz.



Using as per the supply shown in diagram 1, the flux created by the stator windings will be constant from 0 frequency to 50Hz frequency, at frequencies higher than 50 Hz, the flux will be lower than the maximum value.

Note: At low frequencies (0 – 10Hz.) due to voltage drop, in order to keep the flux constant, the supply voltage should be slightly increased. This voltage increase depends both on the motor type and on the inverter type.

Consequently the motors in standard production (self-ventilating code IC411) are able to run at constant torque between 40 and 50 Hz and at constant power in the section included between 50 and 80 Hz (see diagram 2 and 3).
Upon request, the EG line motors can be equipped with an auxiliary fan (code IC 416), in case they can supply a constant torque between 0 and 50 Hz and a constant power in the section included between 50 and 80 Hz.

All Parvalux motors are fitted with phase barrier insulation which are suitable for inverter use.

Inverter Supply Continued

Diagram 2 - Power Output - Supply frequency

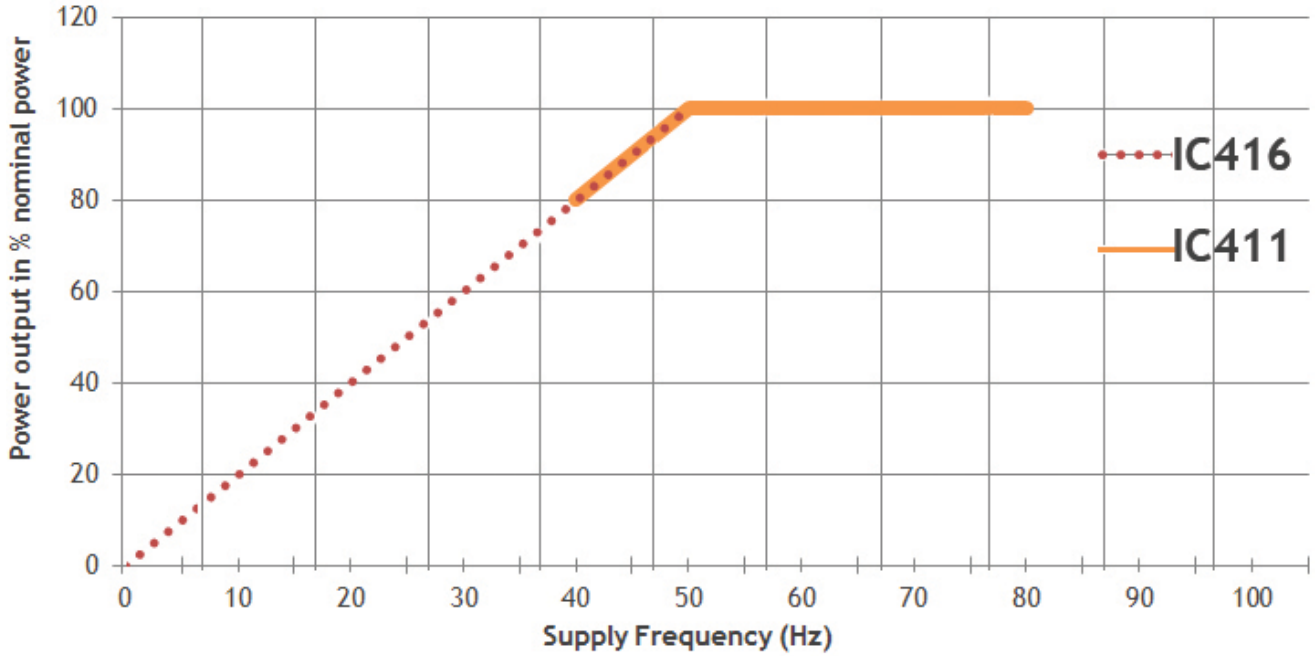
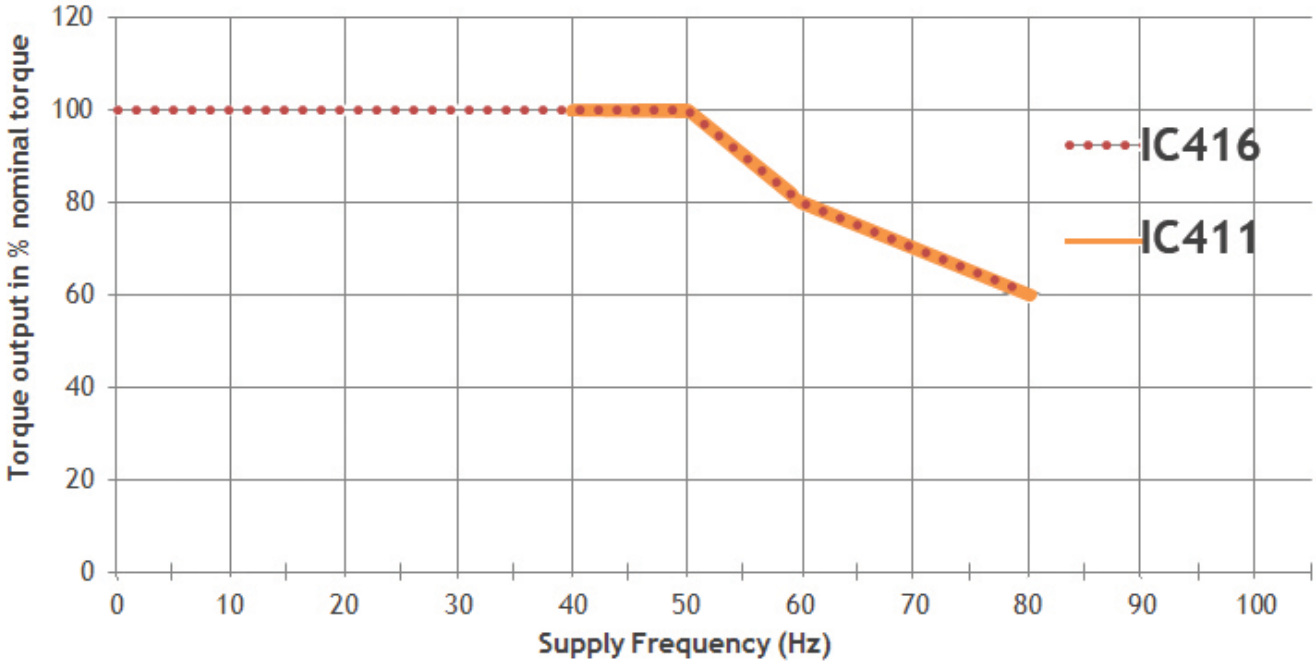


Diagram 3 - Torque Output - Supply frequency



....pure expertise

Maximum Speed

Motors supplied by inverter can run at a frequency higher than the rated level supplying the rated power up to the maximum frequency mentioned in table.

In these conditions the motor maximum torque remains 1.6 times higher than the rated torque.

Frame Size	Max Supply Frequency (Hz)			
	2 poles	4 poles	6 poles	8 poles
56-90	75	75	60	60
100-112	70	70	60	60
132-160	65	65	60	60

It is also possible to supply motors at a higher frequency, in this case the deliverable motor power will be progressively reduced. In such cases the motor maximum speeds, also at no load operation or loaded by the machine, must never exceed the limit stated in the following table:

Frame Size	Max Permissible Speed			
	2 poles	4 poles	6 poles	8 poles
132	5000	5000	4500	4500
160	5000	5000	4500	4500
180	5000	5000	4500	4500
200	5000	5000	4500	4500
225	4500	4500	4000	4000
250	4000	4000	3800	3800
280	4000	3000	3000	3000
315	3600	2600	2600	2600
355	3600	2600	2600	2600

Auxiliary Fans

All frame sizes can be supplied with cooling system IC 416 (forced ventilation) on request. In this case a suitable fan is fitted inside the fan cover and suitably reinforced. Parvalux always recommends forced ventilation on motors used below 25 Hz or above 75 Hz. Consequently the ventilation is independent of the rotation speed of the motor itself. This solution is particularly suitable for inverter supplied motors.

Frame Size	THREE PHASE SUPPLY VOLTAGE 230/400V	SUPPLY FREQUENCY 50HZ	INPUT POWER W	SINGLE PHASE SUPPLY VOLTAGE 230V	SUPPLY FREQUENCY HZ	INPUT POWER W
63	230/400	50	20	230	50	17
71	230/400	50	25	230	50	33
80	230/400	50	29	230	50	35
90	230/400	50	32	230	50	45
100	230/400	50	58	230	50	30
112	230/400	50	69	230	50	35
132	230/400	50	52	230	50	32
160	230/400	50	70	230	50	50
180	230/400	50	85	230	50	47
200	230/400	50	105	230	50	49
225	230/400	50	105	230	50	70
250	230/400	50	115	230	50	126
280	230/400	50	180	230	50	149
315	230/400	50	480	230	50	-
355	230/400	50	400	230	50	-

The following table shows the increase that is applicable to dimensions L (overall length) when independent ventilation is mounted. When an encoder is mounted with independent ventilation, dimensions L does not change and remains the same as the motor with independent ventilation.

Frame Size	A3 Series	A3H Series	C3 Series
	Dimension in mm		
63	92	92	-
71	92	105	-
80	98	110	-
90	97	110	-
100	103	120	-
112	93	125	-
132	109	120	120
160	-	145	130
180	-	-	130
200	-	-	140
225	-	-	160
250	-	-	167
280	-	-	175
315	-	-	205
355	-	-	205

Permissible Bearing Load

The theoretical basic fatigue life for bearings is calculated according to the provisions of the ISO R 281-1 standard. Life is calculated assuming that motors are running under normal ambient conditions, without abnormal vibrations, without axial or radial loads beyond the ones detailed in the following tables and with operating temperatures of the bearing ranging between - 30 and +85°C.

Life calculated this way is called basic life (L□□H) expressed in hours of operation.

50% of bearings reach a life equal to five times the basic life resulting from the calculation.

The values detailed below are the maximum permitted axial and radial loads for a basic life(L□□H), and are calculated according to the provisions of the ISO Standards, equal to 20000 and 40000 hours of operation.

Values of the radial loads are given both for loads applied to the shaft extension (Xmax) and in correspondence of the face on the shaft housing (x□).

Radial loads that can be applied linearly, change with the change of the application point, therefore for loads placed at a distance from the shaft face (X□), the maximum load that can be applied is given as the following expression:

Where:
Fra=permitted radial load at point X
C□□=permitted radial load at point X
Cxmax=permitted radial point at X
Xmax=shaft extension
X=distance from the application point of the load to the shaft face

To verify that belt tension does not exceed the maximum value allowed, the following formula can be used:

F=radial forced in Nm
P=power transmitted in KW
N=number of revs. Per minute
D=pulley diameter in meters
K=constant

Constant values K:

2	for flat pulley with tension roller
2,25	for sheaves with V belt
2,5-3	for flat belts without tension roller, or for heavy duty with any type of pulley

Dimension Definitions

Definition of Letter symbols for the most common dimensions:

A = distance between centre lines of fixing holes
B = distance between the centre lines of the fixing holes
B' = distance between the centre lines of the auxiliary fixing holes
C = distance the shoulder on the shaft at Dend to the centre line of the mounting holes in the nearest feet
D = diameter of the shaft extension at D-end
E = length of the shaft extension from the shoulder at the D-end
F = width of the keyway of the shaft extension at D-end
GA = distance from the top of the key to the opposite surface of the shaft extension at D-end
H = distance from the centre line of the shaft to the bottom of the feet
HD = distance from the top of the lifting eye, the terminal box or other most salient part mounted on the top of the motor to the bottom of the feet
K = diameter of the holes or width of the slots in the feet of the motor
L = overall length of the motor with a single shaft extension
M = pitch circle diameter of the fixing holes
N = diameter of the spigot
P = outside diameter of the flange, or in the case of a non-circular outline twice the maximum radial dimension
S = diameter of the fixing holes in the mounting flange or nominal diameter of thread

IP Protection

The degree of protection from ingress of foreign bodies and liquids, and the prevention of a person from touching live or moving parts, are indicated by the two digits in the IP code detailed on the folllowing page. For rotating electrical machines the classification is recognised internationally and is described in detail in EN 60034-5:2001.

Parvalux motors are manufactured in compliance with 60034-5 standards.

A1PC/A1DC/A3/A3B/A3H/C3 series motors:
IP55 is Standard - totally enclosed motors, fan cooled, protected against dust penetration from dust and water ingress.

IP56/IP65 (upon request) totally enclosed motors, fan cooled, protected against dust penetration and weatherproof, for use on deck.

Normally IP56/IP65 motors are supplied with external fan (IC 411 – IC 418). Upon request they can be supplied without fan (IC 140). In this case the features, outputs and technical data will be supplied upon request.

The cooling fan is protected by a fan cowl with IP20 protection degree, in line with safety standards.
Motors for vertical mounting V1, V5 and V1N5 can be supplied with rain canopy.
The terminal box, in aluminium or cast iron, has IP55 or IP56 protection degree.

IP Protection

First (IP) Number
Protection against solid foreign objects

IP	Protection of the machine from harmful ingress of solid foreign objects	Prevention of a person from touching live or moving parts:
0	No protection	No prevention
1	Protected from solid objects greater than 50 mm diameter	No access for a part of the human body such as a hand
2	Protected from solid objects greater than 12 mm diameter	No access for a part of the human body such as a finger
3	Protected from solid objects greater than 2.5 mm diameter	No access for a hand-held object such as a small tool 2.5 mm diameter
4	Protected from solid objects greater than 1 mm diameter	No access for a hand-held object such as a wire 1 mm diameter
5	Protection from dust (limited ingress with no harmful effects is permitted)	No access to live or moving parts
6	Totally protected from ingress of dust	No access to live or moving parts

If an external fan is protected by a guard from solid objects greater than 12 mm diameter and the remainder of the motor meets a higher IP rating then the higher IP rating may be claimed.

A smooth rotating shaft is not considered dangerous.

It is the responsibility of the customer or machine builder to ensure that any exposed shafts or couplings which are intended to allow the machine to be integrated into an assembly or finished product are appropriately protected.

Second (IP) Number
Protection of the machine from harmful ingress of water (limited ingress with no harmful effects is permitted)

IP	Requirements
0	No protection
1	Protected from vertically dripping water with machine mounted in normal position
2	Protected from dripping water from an angle up to 15 degrees from the vertical
3	Protected from spraying water falling from an angle up to 60 degrees from the vertical
4	Protected from splashing water from any direction
5	Protected from jets of water from any direction
6	Protected from powerful jets of water from any direction
7	Protected from powerful jets of water from any direction and from immersion under specified conditions of pressure and time
8	Protected from powerful jets of water from any direction and from continuous immersion under specified conditions of pressure

PARVALUX

THE UK'S LEADING MANUFACTURER OF
ELECTRIC MOTORS AND GEARED SOLUTIONS

ALSO AVAILABLE

DC MOTORS

- MOTOR ONLY AND GEARED SOLUTIONS
- BRUSHED AND BRUSHLESS
- UP TO 750 WATTS
- DC DRIVES

GEARED SOLUTIONS

- EXTENSIVE RANGE OF GEARED SOLUTIONS
- INCLUDING:
- INLINE, RIGHT ANGLE, 3 POINT FIXING
- SINGLE SPEED OR TWO SPEED
- WORM, DOUBLE WORM, SPUR, PLANETARY
- AND REDUCTION BOXES ALL AVAILABLE

VALUE ADD SOLUTIONS

- CUSTOMISABLE PRODUCT
- QUICK QUOTE TURNAROUND
- FULL ENGINEERING SUPPORT
- EX STOCK OR 6 WEEK LEAD TIME
- LOW & MEDIUM BATCH FLEXIBILITY

SALES BIRMINGHAM:
0121 333 5964
SERVICE@PARVALUX.COM

SALES BOURNEMOUTH:
01202 512 575
SALES@PARVALUX.COM

CONTACT US